

REVISION OF THE GENUS *YPTHIMA* IN THE ETHIOPIAN REGION EXCLUDING MADAGASCAR (LEPIDOPTERA, SATYRIDAE)

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ABSTRACT

The Afrotropical species of the genus *Ypthima* are revised. All known species and sub-species are described, including the following new taxa: *Y. condamini*, *Y. jacksoni*, *Y. lamto*, *Y. vuattouxi*, *Y. yatta*, *Y. antennata cornesi*, *Y. condamini nigeriae* and *Y. pupillaris obscurata*. The female of *Y. diplommata* Overlaet is described for the first time. Keys are provided based on the male and female genitalia. Photographs of the butterflies and free-hand drawings of the male and female genitalia are given, as well as distribution maps of all known species and subspecies.

INTRODUCTION

The genus *Ypthima* was erected and described by Hübner (1818). *Ypthima huebneri* (Kirby, 1871) (an Indian species), was designated type-species by the Commission. Since Elwes & Edwards (1893) revised the genus, no attempt has been made to give a complete survey of the *Ypthima* species occurring on the African continent. Other students have dealt with species from certain parts of Africa only, mainly from relatively well accessible areas. This has led to many misidentifications and a confusing synonymy.

In this paper an attempt is made to give an up-to-date account of the genus *Ypthima* occurring on the African continent. Work was long hampered and delayed due to the difficulty in obtaining enough material of some of the species from various parts of Africa. To get a comparatively clear picture of the distribution of the various species, it has been necessary to write to many private collectors and institutions for loan or exchange of material. To start with, the author's private collection from Tanzania and the large collection in the National Museum, Nairobi, were studied and arranged. It was soon apparent that this was by no means enough, so requests were made for type material and photographs from various museums in Europe and South Africa. They were generously supplied and did help to a great extent. Later, large collections from the Ivory Coast revealed species not yet described and many other interesting

facts. Finally, a study was made of the extensive *Ypthima* collections in the British Museum (Nat. Hist.) and this revealed further interesting facts and helped to clear up some difficulties.

As many of the *Ypthima* species are extremely variable during the seasons and often external characters alone are of little use in identification, extensive dissections were carried out and a key was made, mainly based on the genitalia of both males and females. Apart from the genitalia, also antennae, labial palps and fore legs were examined.

In spite of generous help from institutions and private persons, further study is needed on this group, particularly with regard to distribution and subspeciation. There are many parts of Africa from where it is not easy to obtain enough material.

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ABBREVIATIONS USED IN THE TEXT

BM	British Museum (Nat. Hist.), London
BMG	Berlin Museum, D.D.R.
D.C.	discoidal cell
d.s.f.	dry season form
f.w.	fore wing
h.w.	hind wing
IFAN	Institute Fondamental d'Afrique Noire, Dakar
int. f.	intermediate form
NMN	National Museum, Nairobi
NSPRI	N.S.P.R. Institute, Lagos, Nigeria
spec. nova	new species
stat. nov.	new status
TMB	Tervuren Museum, Belgium
TMSA	Transvaal Museum, South Africa
w.s.f.	wet season form

The preparation numbers followed by an A or K are genitalia preparations deposited in the British Museum; all numbers without letters are

in the author's collection and some in the National Museum, Nairobi.

CHARACTERIZATION OF THE GENUS

External characters. — The fore legs of the males are very minute and usually much shorter than in the female, whose fore legs are much better developed. In the female of *Y. recta*, however, they are much reduced and not much larger than in the male. The wings are rather uniformly brown except in *Y. albida*; they have two swollen veins in the basal area and there are no androconial hair tufts on the wings. The antennae are shorter than half the length of the fore wing, except in the West African race of *Y. antennata*. The club is usually narrow and long, not much thicker than the shaft. The only species here dealt with that has a thick club is *Y. antennata*. The underside of the club is double-grooved on each joint.

Male genitalia. — An important character in the male genitalia of *Ypthima* is the shape of the valva; the length of the valva in relation to the length of the aedeagus and/or to the combined length of the tegumen-uncus, the width and general shape of the uncus are also of taxonomic value, as is the vinculum, which may be nearly straight as in *Y. condamini*, or strongly bent as in *Y. asterope*.

At least in the genus *Ypthima* it is advisable to study the genitalia unmounted, to make it possible to compare species both in dorsal (or ventral if preferred) and lateral aspect. Personally I prefer the dorsal aspect with regard to *Ypthima*. Certain important features can only be seen in dorsal or ventral view, particularly the width of the tegumen and the uncus, the position of apophyses angulares which in certain species are turned interiorly (towards each other). There are no subunci in *Ypthima*.

Female genitalia. — The taxonomically most important characters in the female genitalia are apparently found in the genital plates, one anterior and one posterior to the ostium. They are variable within the same species, but only to a limited extent (no. 865, with a folded ant. plate, but with external characters exactly like a normal *Y. asterope*, may constitute another species, but is more probably an aberrant specimen of *Y. asterope*.) The key is based to a large extent on these characters. The nature of sclerotization of the plates is also of major importance. The shape and depth of the wall encircling the sinus vaginalis is of taxonomic value and also to a certain extent, the presence or absence of sclero-

tized ribs of the anterior wall, but in some species, as in *Y. asterope*, the wall is strongly ribbed in some specimens, and not ribbed at all in others. In view of this variability within a species, this feature is not included in the key. Other parts of taxonomic value are the length and width of the ductus bursae and the size and shape of the corpus bursae. There is no signum in *Ypthima*.

ECOLOGY

The adult *Ypthima* is a typical inhabitant of open grassland and woodland. A few species however prefer moister habitats. *Y. albida* inhabits forest margins and swampy places near rivers and along forest edges. *Y. doleta* also prefers humid areas and does not occur in more arid country. In Tanzania, *Y. doleta* only occurs in the humid Bukoba District in the north-west corner. *Y. asterope* inhabits the more arid countries of Africa, such as Southern Africa, the dryer parts of Kenya to Somalia, parts of Ethiopia, Sudan and west to Senegal. It seldom penetrates into the more humid areas of tropical Africa, and in Asia it occurs from the Arabian peninsula to Lebanon, Israel and India. Personally I have found both males and females of *Y. antennata* concentrated in rocky areas of sandstone formations, often settling on the rocks.

The flight of all *Ypthima* species is weak and erratic and they tend to fly close to the ground between grasses, frequently settling on the ground or on low vegetation. As a rule, they do not visit flowers, nor are they attracted by fermented juices.

DISCUSSION

At least with regard to *Ypthima*, the writer has come to the conclusion that the comparative length of the two last joints of the antennal club is of much less taxonomic value than previously thought. Generally the two last joints vary a great deal within the same species, even within the same locality, as shown with regard to *Y. impura* and *Y. pupillaris*. The length and thickness of the club in *Y. antennata* is also very variable, to such a degree, that I at first presumed that two species were involved. Specimens of *Y. antennata* in Rhodesia to central Tanzania normally, but not always, develop a shorter and thicker antennal club than those taken further north, from northern Tanzania to Sudan. The genitalia, however, show no difference in either sex.

It has been found that the numerous aber-

rants described have little or no value as such. For the greater part, they constitute seasonal forms and also variations within the same season. Some even are distinct species, having nothing to do with the species they were supposed to be aberrants of. Many earlier writers attached too much importance to the number and size of the ocellar spots. They are in fact extremely variable within the same species.

The antenna-wing ratio is measured for each species. However, I do not find it to be of too much importance. It is extremely difficult to measure the length of the antenna accurately, because it is in most instances more or less curved. Even when straightened out with alcohol, they quickly curve back to the original position and it is difficult to get it measured in time. A slight error may make a fairly big difference in the ratio. Species with only a little difference of the antennal length compared to the wing can hardly be distinguished from each other in this manner and this applies to most of the *Ypthima* dealt with here. The ratios also vary in different habitats. An example of this is *Y. antennata*, with a much higher ratio for the Nigerian race than for the aggregate from the eastern part of Africa. Ratios for *Y. impura impura* and *Y. pupillaris pupillaris* from the Ivory Coast are higher than for the eastern races. Curiously enough, it seems that the aggregates from western Africa exhibit higher ratios than do specimens of the same species from East Africa. It probably has something to do with the environment. (*Y. doleta*, however, shows no variation in the ratio.) One might therefore presume that this difference, constant for each habitat, suggests separate species. At least for *Y. impura* and *Y. pupillaris*, this is out of the question, as both exhibit characteristic and constant genitalic characters in both sexes and races.

As stated under *Y. asterope*, the specimens from the Nairobi area with the more slender valva, may prove to be distinct from *Y. asterope*. However, the external characters show no difference whatsoever, and too few specimens of this form are available, and the female is not yet known. The specimens of *Y. asterope* from South Africa and Rhodesia differ somewhat from specimens taken in Kenya to Sudan in the underside h. w. discal band. The status of *Y. asterope asterope* and *Y. asterope hereroica* is not quite clear. Apparently these two races do have a common boundary and even overlap in one area. In Tanzania *Y. asterope asterope*, as far as I know, does only occur in the Tanga Region

(one male in the BM, taken by T. H. E. Jackson). The previous records proved to be wrong. I have not seen any specimens from Malawi and Zambia and no material of *Y. asterope* is available from Zaire. On the other hand, it turns up again in Gambia and Senegal and Northern Nigeria. It occurs further north from here and probably also across Africa, just south of the Sahara to Uganda and Kenya. However, further south there is a blank area straight across Africa and *Y. asterope* does not occur again before we get to Angola and the southern part of Africa. In fact, *Y. asterope* is less common and widespread in Africa than earlier believed. As to the related species *Y. condamini*, *Y. rhodesiana* and *Y. congoana*, these all occur within the "blank" area. *Y. condamini* has a wide, although scattered distribution from South Africa to Senegal and Uganda. *Y. rhodesiana* is more restricted to the eastern part of Africa, from Rhodesia to Kenya and Katanga in Zaire. While the distribution areas of these two species considerably overlap the area of *Y. asterope*, *Y. congoana* has hitherto only been taken in the "blank" area, being mainly restricted to Katanga.

The discovery of *Y. antennata* on the plateau in Nigeria proves that this species is more widely distributed than was previously thought. The Nigerian specimens, however, constitute a separate race. It is very likely that *Y. antennata* occurs in many more areas of Africa, as this species, in spite of its very wide club, is frequently confused with and often referred to *Y. asterope*.

KEY TO THE CONTINENTAL AFRICAN SPECIES OF
Ypthima, BASED ON THE MALE GENITALIA

1. Wings white 2
- Wings brown 4
2. Upperside markings clearly defined 3
- Upperside markings faint or greatly reduced *albida uniformis*
3. Upperside wings bluish white; underside pale *albida occidentalis*
- Upperside wings whitish; underside rather dark *albida albida*
4. Valva, distance from base to ventral bend less than half the total length of valva (in *antennata* almost half) 6
- Valva, distance from base to bend more than half the length of valva; dorsal aspect of uncus gradually tapering to a narrow distal portion 5
5. Apex of valva thick, knob-like *doleta*
- Apex of valva slender *diplommata*
6. Uncus as under 5; aedeagus sinuous or

- rather straight, not evenly curved from the open basal portion, except in *condamini* . . . 7
- Uncus, basal portion flattened, not gradually tapering to the narrow part, see fig. 75; aedeagus evenly curved and gradually tapering 20
 7. Aedeagus usually very sinuous, except in *condamini*; distal portion of valva more or less flattened dorsad and usually with sharp inner edge 12
 - Aedeagus straighter; valva not flattened distad and without sharp inner edge 8
 8. Aedeagus as long as, or longer than valva; valva elbowed as normal 10
 - Aedeagus shorter than valva, distal half sharply narrowed ventrally; valva narrow and only a little elbowed 9
 9. Valva narrow and straight; aedeagus much shorter than valva, ratio 0.75; h.w. upper-side discal and submarginal bands prominent *pulchra*
 - Valva, narrow portion sinuous; aedeagus a little shorter than valva, ratio 0.87; h.w. upper-side discal and submarginal bands obscured *praestans*
 10. Antennal club short and thick; valva, ventral curve even and gradual, distance from base to curve equal to, or a little longer than distal portion *antennata*
 - Antennal club thin; valva, ventral curve acute, distance from base to curve much shorter than distal portion 11
 11. Valva as long as tegumen-uncus ... *jacksoni*
 - Valva much longer than tegumen-uncus ... *vuattouxi*
 12. Accessory plate placed at a sharp angle to the longitudinal section of valva; aedeagus longer than valva 13
 - Accessory plate almost perpendicular to the longitudinal axis; aedeagus shorter than, equal to or longer than valva 16
 13. Vinculum long, almost straight; valva, narrow distal portion short and robust, somewhat swollen distad of the ventral bend, see fig. 43 *condamini*
 - Vinculum moderately or strongly curved; narrow distal portion of valva not robust 14
 14. Vinculum moderately curved; inner edge of valva, narrow distal portion very sharp from apex to near wide portion; diaphragma unsclerotized; appendix angulare bent interiorly *simplicia*
 - Vinculum strongly curved; inner edge of valva moderately sharp, for a short distance

- only 15
15. Diaphragma with a triangular sclerotization; appendix angulare straight *asterope* (atypic)
- Diaphragma without sclerotization; appendix angulare bent interiorly *simplicia*
16. Valva robust; apex and accessory plate equally broad 17
- Valva much more slender, distal portion slender, width of accessory plate not as broad as apex of valva 19
17. Valva dorsal margin twice the length of base *asterope asterope*
- Valva dorsal margin 1.5 times the length of base 18
18. Aedeagus as long as valva; upperside f.w. ocellar area usually sharply defined *asterope hereroica*
- Aedeagus much longer than valva; upperside f.w. ocellar area obscured *yatta*
19. Uncus rather broad; aedeagus as long as, or a little shorter than valva *rhodesiana*
- Uncus narrow; aedeagus as long as or a little longer than valva *congoana*
20. Uncus wide from base to near apex, to narrow portion; valva, basal portion very wide, narrow portion very slender 26
- Uncus and valva not as above 21
21. Uncus, narrow portion strongly curved; valva long, slender and rather evenly tapering; aedeagus long and very thin 25
- Uncus and valva normal; aedeagus short 22
22. Valva, base of narrow distal portion thickened, see fig. 61, thus robust part twice as long as the thin portion *lamto*
- Narrow portion of valva not thickened basally 23
23. Diaphragma with a triangular sclerotization; antenna-wing ratio 0.36 24
- Diaphragma without sclerotization; antenna-wing ratio 0.44 *recta*
24. Basal end of aedeagus widened and straight cut *granulosa* (inland form)
- Basal end of aedeagus rounded, not widened *granulosa* (coastal form)
25. H.w., upperside discal bands clearly defined *impura impura*
- H.w., discal bands not clearly defined *impura paupera*
26. Narrow distal portion of valva slender, as long as, or longer than dorsal length of broad portion; inner side of f.w. ocellar area above, clearly defined; h.w. discal markings distinct *pupillaris pupillaris*
- Narrow distal portion of valva less slender,

in most cases shorter than dorsal length of broad portion; inner side of f.w. ocellar area not clearly defined; h.w. markings obscured *pupillaris obscurata*

KEY TO THE CONTINENTAL AFRICAN SPECIES OF *Ypthima* BASED ON THE FEMALE GENITALIA

1. Anterior plate heavily sclerotized; posterior plate with posterior part sclerotized, the frontal part formed like an unsclerotized tongue-like lobe 2
- Anterior plate round and unsclerotized; posterior plate as above; edge of anterior plate finely serrated *congoana*
- Both plates unsclerotized; sometimes anterior plate weakly sclerotized 8
- Differing from above 10
2. Anterior plate small, rather narrow; posterior plate wider and shorter 3
- Anterior plate large and wide 7
3. Sclerotized part of posterior plate rather narrow, usually not bipectinate distad; its anterior lobe small and pointing ventrad . 5
- Sclerotized part of posterior plate large and bipectinate distad; anterior lobe as above; bursa very long and narrow *yatta*
- Sclerotized part of posterior plate large and broad; anterior lobe tongue-like and pointing more posteriorly; ductus wide and short; bursa wide 4
4. Apex of posterior plate bipectinate; underside of wings rather pale; discal line of h.w. evenly curved *rhodesiana*
- Apex of posterior plate rounded with or without apical emargination; underside of wings dark; h.w., discal line irregular *simplicia*
5. Antennal club abrupt and thick; bursa rather large; sinus vaginalis moderately deep; posterior apophyses rather narrow *antennata*
- Antennal club gradual, narrow; bursa smaller; sinus vaginalis wide and shallow; posterior apophyses rectangularly shaped 6
6. Anterior plate simple, bilobed, with or without spines at margin; anterior wall of sinus vaginalis evenly rounded; posterior plate variable *asterope*
- Anterior plate strongly folded; anterior wall of sinus vaginalis prolonged anteriorly *asterope* (atypic)
7. Sinus vaginalis deep; anterior plate not hairy *granulosa*
- Sinus vaginalis wide and shallow; anterior plate almost circular, covered with spiny

- hairs..... *condamini*
8. Posterior plate sack-like, wider than anterior plate; both plates unsclerotized 9
- Anterior plate wider than posterior plate, strongly bilobed, sometimes slightly sclerotized..... *doleta*
9. Wings white..... *albida*
- Wings brown..... *jacksoni*
10. Anterior plate sclerotized, large and wide, simple, usually widest in the middle 13
- Anterior plate tongue-like, parallel-sided; distal end of posterior plate bent over the ant. plate; sinus vaginalis shallow . . . *pulchra*
- Anterior plate complex, folded, sinus vaginalis deep 11
11. Both anterior and posterior plates complex and folded..... 12
- Only the anterior plate folded; posterior plate long and narrow..... *impura*
12. Anterior part of posterior plate bilobed *pupillaris*
- Anterior part of posterior plate evenly rounded..... *praestans*
13. Posterior plate unsclerotized, not bilobed 14
- Posterior plate sclerotized, bilobed *vuattouxi*
14. Posterior plate wide at base with long, tongue-like frontal lobe, edges even; sinus vaginalis deep; lateral sclerites wide. 15
- Posterior plate widest in the middle, folded, edges uneven *diplommata*
15. Anterior plate variable, edge uneven and serrated all the way; posterior plate very wide basad with a moderately long anterior lobe; bursa small; fore legs only a little larger than in the male *recta*
- Anterior plate evenly edged and serrated only at the distal end; posterior plate less wide at base with a longer anterior lobe; bursa longer; fore legs much better developed than in the male *lamto*

DESCRIPTION OF THE *Ypthima* SPECIES

Ypthima asterope (Klug)

This species, which is distributed throughout most of south-west Asia and Africa excluding a belt crossing the central part, has been the culprit of many misidentifications. In earlier times when dissection was not generally done, authors like Strand in particular, described many aberrations which in most cases were forms belonging to other species, particularly *Y. granulosa*. Unfortunately, Strand's types were de-

stroyed during the 1939—45 war and the descriptions alone are not sufficient for sure identification. However, it is fairly certain that his *Y. asterope* ab. *interrupta* is the w.s.f. of Butler's *Y. granulosa* and his ab. *uniocellata* the d.s.f. Strand (1909: 23) points out that the underside h.w. has six ocelli which is not at all normal for *Y. asterope*; all the *Y. asterope* I have examined, have from two to four ocellae. However, six ocelli is common in *Y. granulosa* and the d.s.f. has minute spots as in Strand's *uniocellata*.

Externally *Y. asterope* can usually be separated from the closely related species *Y. yatta* sp. nova by the paler subapical ocellar area of the f.w. and 32 antennal joints against 29 in *Y. yatta*.

The male genitalia of *Y. asterope* are generally thought to be easily recognisable by the upturned, truncate apex of the valva and squarely placed, distal accessory plate. This however could very well lead to mistakes, as there turns out to be several species with more or less similarly shaped valva. There is a type of *Y. asterope* with the accessory plates of valva placed at a rather sharp angle; it occurs in the Nairobi area of Kenya and its status is rather dubious (genitalia figured and described below). The external characters are almost exactly identical with those of *Y. asterope* and due to lack of material, I will not make any attempt to describe it here as a species. *Y. yatta* has a similarly shaped valva, but more robust. There are a few more species with valves approaching those of *Y. asterope*, viz. *Y. congoana*, *Y. condamini*, *Y. lamto* and to a certain extent *Y. rhodesiana*. *Y. lamto*, however, has a differently shaped uncus. But none of these have the truncate apex with squarely placed accessory plate as in normal *Y. asterope*, and the female genitalia differ.

Ypthima asterope asterope (Klug)

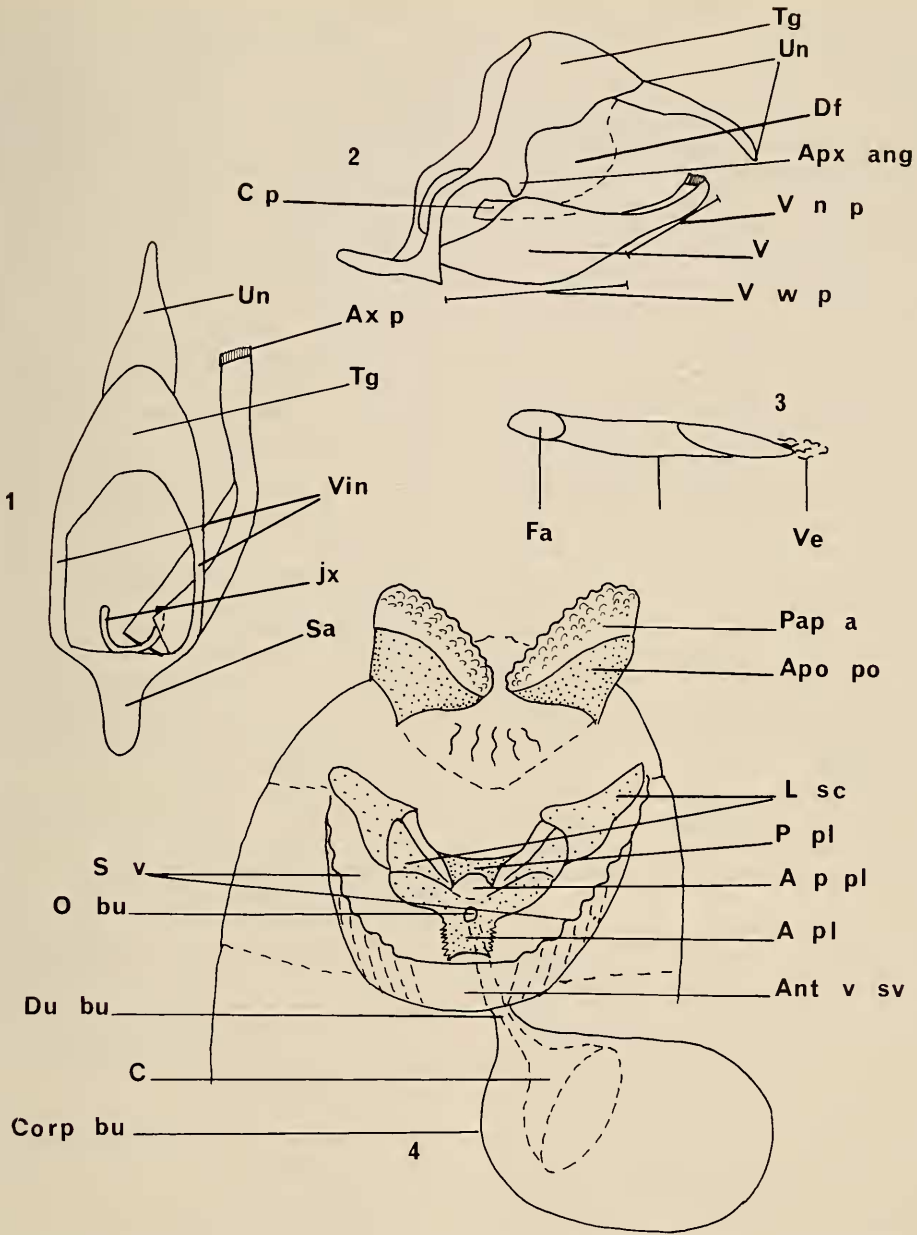
(figs. 1—5, 12—19, 100—102, 137—145, pl. 1 figs. 1—8)

Hipparchia asterope Klug, 1832, pl. 29 figs. 11—14 (Aden).

Ypthima asterope ab. *binucholata* Strand, 1909: 112 (Sadani, Tanzania).

Ypthima asterope ab. *biocelligera* Strand, 1909: 112 (Sadani, Tanzania).

External characters (pl. 1 figs. 1—8). — Antenna male and female 32 to 33 joints, shaft black, white ringed above and below; club gradual, but distinct, smooth, 12—13 joints, nar-



Figs. 1—3. Male genitalia of *Ypthima asterope* Klug. 1, dorsal aspect; 2, lateral aspect; 3, aedeagus (Apx ang, appendix angulare; Ae, aedeagus; Ax p, accessory plate, terminal process of valva; C p, costal process; Df, diaphragma; Fa, phallobase; Jx, juxta; Sa, saccus; Tg, tegumen; Un, uncus; V, valva, clasper; Ve, vesica; Vin, vinculum; V n p, valva narrow portion; V w p, valva wide portion). Fig. 4. Female genitalia of *Ypthima asterope* Klug, ventral aspect (Ant v sv, anterior wall of sinus vaginalis; A pl, anterior genital plate; Apo po, posterior apophyse; A p pl, anterior part of posterior genital plate; C, colliculum; Corp bu, corpus bursae, bursa; Du bu, ductus bursae; L sc, lateral sclerites; O bu, ostium bursae; Pap a, papilla analis, anal lobes, ovipositor lobes; P pl, posterior genital plate; S v, sinus vaginalis, genital chamber).

rowly and finely double grooved, last joint as long as penultimate; palpi second joint curved, twice as long as last joint.

Male. — Upperside wings fuscous brown (faded in old specimens); f.w. subapical ocellar area clearly defined, rounded and usually much paler than the ground colour, with a well defined, dark brown outer border, a somewhat indistinct inner border line; the submarginal area is paler than the ground colour; a rather wide, dark margin; cilia basally pale, then brown and white tipped. H.w. with an ocellar spot in 2, sometimes also in 1b (w.s.f.); there is no clear discal line, a faint submarginal line, incurved in 4 and 5 and a dark marginal line; cilia as in the f.w., but slightly paler. Underside ground colour whitish and striation rather spaced, giving a pale appearance, particularly in the h.w.; f.w. ocellar area roundish, reaching middle of space 2; a thin, black marginal line; h.w. a double or single spot in 1b, one in 2 and in most cases one in 6. The spots of the w.s.f. are larger than those of the d.s.f.; there is an uneven discal line, which generally is clearer in the d.s.f., excurved at vein 5; there is a submarginal line, almost straight from the tornal spot to vein 3, thence wavy and indistinct to near apex; a black marginal line. Length of f.w., 15 to 17 mm, antenna-wing ratio 0.43.

Female. — Ground colour only slightly paler than in the male; the ocellar area as in the male; sometimes a faint indication of a h.w. discal line. Length of f.w., 16 to 18.5 mm, antenna-wing ratio 0.39.

Male genitalia (figs. 1—3, 12—19). — Prep. nos. 393, 908, 923, 713A, 2275—77 from Somalia; 394, 597, 598, 862, 2281, 2284 from Kenya; 1842K, 2267, 2268 from Sudan; 715 from Senegal; 730A, 762A, 2047 from Angola; 726A from Mozambique; 696A from Ethiopia; 1846K from Arabia; 1848K from Lebanon; 1854K from Natal, S. Africa; 1915 from Rhodesia; 2266 from Amani, Tanzania. Dorsal aspect: Tegumen wide, as long as uncus, proximal margin evenly curved; valva, distal portion rectangularly shaped, flattened dorsally, forming a sharp inner (lateral) edge; outer margin evenly curved from base to the discal rectangular part; accessory plate upturned, at almost 90° angle to the longitudinal axis of valva. Lateral aspect: Vinculum short, strongly curved; valva robust, the narrow distal portion thicker than usual in *Ypthima*, but much slenderer and longer than in *Y. yatta*; distal portion truncate, upturned; aedeagus as long as valva.

Female genitalia (figs. 4, 100—102, 137—145). — Prep. nos. 559, 692, 907, 909, 922, 711A, 714A, 715A, 1840K from Somalia; 712 from Senegal; 865, 716A, 717A, 1864, 1875 from Kenya; 706A, 707A from Ethiopia; 1845K from Arabia; 1847K, 1946K, 1949K from Lebanon; 1947K from Trans-Jordan; 1948K from W. Aden. Anal lobes triangular; sinus vaginalis wide and shallow, evenly rounded; edge of anterior wall usually wavy; inside of the wall with more or less sclerotized longitudinal ribs, a rectangular frontal sclerotized area; anterior plate small, longer than wide, bilobed distally; posterior plate consisting of an unsclerotized frontal tongue-like protuberance and a basal, wider, but rather narrow, sclerotized portion, tapering on both sides (this portion is rather variable). The lateral sclerites are U-shaped; bursa obliquely ovoid to pear-shaped. The obliqueness is obscured if bursa is turned 90°. In specimen no. 873 from Kiambitti Hill, Embu, Kenya, the anterior plate is trilobed apically, the middle lobe small and the frontal part of the anterior wall unsclerotized, but otherwise corresponds with normal *Y. asterope*.

As stated before, there is a form of *Y. asterope* in the Nairobi area, Kenya, with genitalia somewhat different from typical *Y. asterope*. It can be described as follows:

Prep. nos. 598, 686A, 687A. Dorsal aspect: The basal margin of tegumen with three concavities; apart from the dorsal one there is one on each side, making the outline wavy; valva more slender, outer margin less curved, distal portion more rounded and less square looking, although somewhat flattened dorsad and the inner edge is as sharp as normal; the apical accessory plate placed more at an angle, about 70°. Lateral aspect: Uncus a little longer than tegumen, the lateral emarginations of the basal part of tegumen discernible; valva more slender and the narrow portion longer than normal; aedeagus longer than valva, sinuous, with a blunt apex; diaphragma with a slightly sclerotized patch ventrad of anus.

Specimens belonging to this type, have so far only been taken in the Nairobi area to Yatta in Kenya and may very well constitute a distinct species, but too little material is available to ascertain this. The external characters are exactly like those of *asterope*.

Note. — Strand's *Y. asterope* ab. *binucholata* and ab. *biocelligera* are almost certainly not *Y. asterope*, but probably *Y. granulosa*. The type series of ab. *binucholata* may constitute

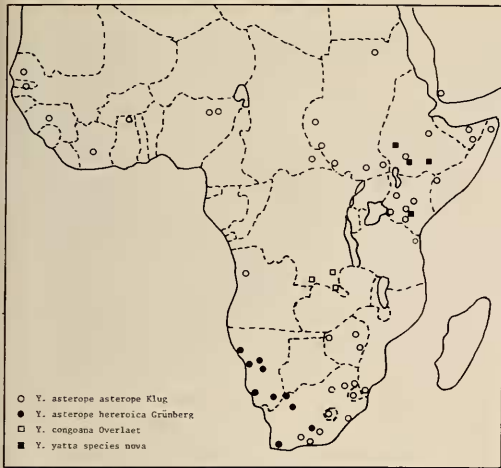


Fig. 5. Distribution of *Ypthima* species.

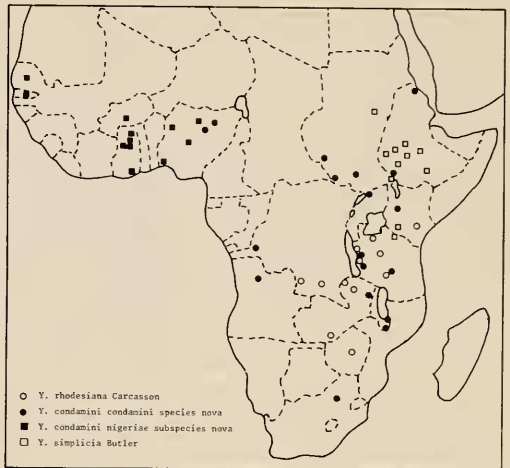


Fig. 6. Distribution of *Ypthima* species.

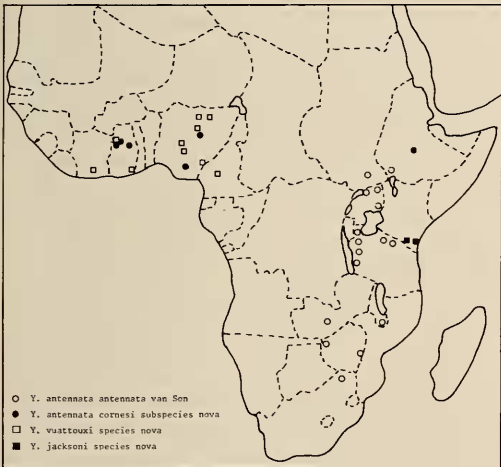


Fig. 7. Distribution of *Ypthima* species.



Fig. 8. Distribution of *Ypthima* species.

more than one species.

Habitat. — Rather arid bush country.

Distribution (fig. 5). — Most of S.W. Asia and Africa excluding the more humid parts of Central Africa and excluding S.W. Africa to Cape Province. I have seen no records from Zaire to S. Nigeria and Ghana, nor from Zambia, Malawi, Botswana, Burundi, Ruanda, Uganda and Mozambique except the southernmost part of Mozambique. It certainly occurs in Botswana, northern part of Uganda, further north in Mozambique and possibly also in S. Zambia and Malawi. From several of these

countries I have not seen very much material. In spite of heavy collecting in Tanzania I have never taken *Y. asterope* there. The only record is a single male from Amani, Usambara taken by T. H. E. Jackson.

***Ypthima asterope hereroica* Van Son**
(figs. 5, 38—41, pl. 2 figs. 1, 2)

Ypthima asterope hereroica Van Son 1955: 156, fig. 165.

Ypthima asterope ab. *hereroica*; Grünberg 1910: 101 (Damaraland).

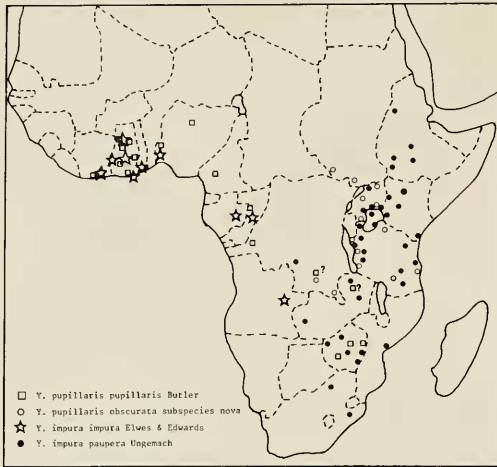


Fig. 9. Distribution of *Ypthima* species.

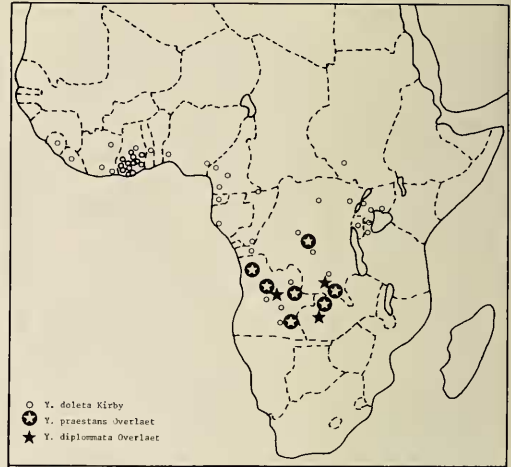


Fig. 10. Distribution of *Ypthima* species.

External characters (pl. 2 figs. 1—2). — Antenna as in *Y. asterope asterope*; pattern of the wings similar to *Y. asterope asterope*, but underside somewhat darker and slightly more unevenly striated giving a mottled appearance; underside h.w. discal band usually more roundly excurved at vein 5 than in specimens from Natal and Transvaal. Van Son (1955: 155) states that in the nominate race the discal line “is strongly angled outwards on vein M2”. This applies best to specimens in eastern South Africa to Rhodesia, but the aggregates from northern Africa and S.W. Asia do not as a rule have a strongly angled discal band. In fact, a long series from Somalia in the B.M. have all a curved discal band as in ssp. *hereroica*. The aggregate from eastern South Africa could possibly constitute a separate race, but due to the variability of *Y. asterope* as a whole, it is very difficult to point out constant characters to separate the South African aggregate from the nominate race.

Male genitalia (figs. 38—41). — Prep. nos. 1919—21, 1843K, 2044—46, 2369—70 from S.W. Africa. Valva is slightly more robust than in *Y. asterope asterope*, almost as in *Y. yatta* sp. n.; the upturned apical portion usually shorter, but in prep. 1843K this was not noticeably shorter and it apparently varies; aedeagus approximately as long as valva; saccus short and wide in dorsal aspect; the diaphragma with a small triangularly shaped, thinly sclerotized area below the anal opening. Van Son (1955: 156) says that there is no sclerotization. The specimens I have examined had sclerotization,

but others could well be without.

Female genitalia. — Prep. nos. 1922, 1923 from S.W. Africa; 1918 from Cape Province. Two preparations have normal genitalia as in *Y. asterope asterope*, while no. 1918 has an atypic posterior plate with bilobed posterior portion.

Habitat. — Dry, open country.

Distribution (fig. 5). — Cape Province to S.W. Africa and probably S. Angola.

Ypthima yatta spec. nova

(figs. 5, 20—23, 134, 135, pl. 2 figs. 3—6)

Differs from *Ypthima asterope* Klug and its subspecies in the slightly broader wings, the less distinct ocellar area, due to the colour approaching that of the rest of the wing; submarginal border not paler than the rest of the wing; the genitalia much more robust than in *Y. asterope asterope*, but only a little more than in ssp. *hereroica* Grünberg.

External characters (pl. 2 figs. 3—6). — Antenna 29 joints, (in *Y. asterope asterope* and *Y. asterope hereroica* 32 joints); shaft white ringed, dark brown below, blackish above; club gradual, but rather thick as in *Y. asterope*, 10 joints, the 11th going over into the shaft, underside double grooved in full length of the joints, end joint slightly longer than penultimate; palpi fawn, second joint twice as long as third joint.

Male. — Uppside wings evenly brown (old specimens); f.w. ocellar area hardly paler than the ground colour, faintly indicated; a very thin and faint, brown marginal line; cilia plain

brown, (in *Y. asterope* basally whitish, then brown and pale tipped); h.w. with one spot in 2, an unclear submarginal line and a fine, dark margin; cilia a little paler than that of the f.w. Underside darker and more uniformly and closely striated than in *Y. asterope*; h.w. discal band shaped as in *Y. asterope*; a double spot in 1b, one in 2 and one in 6; the outer margin angled at vein 4, rounded in *Y. asterope*. Length of f.w. 16 to 17 mm, antenna-wing ratio 0.40.

Female. — As in the male with rather obscured inner part of the ocellar area, but a little larger with broader wings; ground colour paler. Underside as in the male with uniform, close striation; slightly paler. Length of f.w. 16.3 to 17.5 mm.

Male genitalia (figs. 20—23). — Prep. nos. 517, 863, 864 from Kenya; 704A, 712A from Ethiopia. Dorsal aspect: Rather similar to *Y. asterope hereroica* Grünb., but more robust; distal part of valva very wide and short. Lateral aspect: Tegumen-uncus as in *Y. asterope*; valva more robust; the narrow portion very thick, particularly the proximal half; aedeagus much longer than valva, sinuous as in *Y. asterope*, basal open portion (phallobase) constricted in the middle and thick at base, apical portion bent ventrad, the tip upturned, tapering to a point; diaphragma without sclerotization.

Female genitalia (figs. 134—135). — Prep. nos. 741, 720A, 734A, 1954K from Ethiopia. Sinus vaginalis rather wide and shallow; anterior wall ribbed, with an oblong frontal sclerotization; lateral sclerites broad, V-formed; anterior plate very small, crumpled, almost like that of *Y. simplicia*, but sclerotized; posterior plate large, bipectinate distad, not quite symmetrical; the sclerotized part large; a smaller, unsclerotized frontal part; anal lobes large, without apophyse; bursa very long and narrow, tapering proximad, with no distinct junction with ductus, quite distinct from other *Ypthima* species dealt with here.

Habitat. — Not known to author, but probably similar to that of *Y. asterope*, in rather arid country.

Distribution (fig. 5). — Thika in Kenya and south-central Ethiopia.

Holotype ♂: Kenya, Thika, Yatta, 3.v.1942, N. Mitton. Allotype ♀: Ethiopia, Sheikh Hussein, Upp. Schobehli R., 20.ix.1894, Don Smith. Paratypes: Kenya, Thika, Yatta, 3.v.1942, N. Mitton, 1 ♂; same data, but 13.v.1952, R. H. Carcasson, 1 ♂; Ethiopia, Arussi Galla, Daroli, 13.iii.1901, C. V. Erlanger, 2 ♂; Ethiopia, Gen-

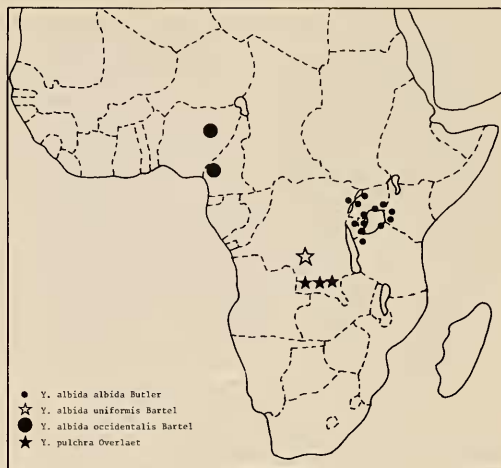


Fig. 11. Distribution of *Ypthima* species.

ale river, 16.iv.1901, C. V. Erlanger, 1 ♂; Gurra, Dagaje, 4—5.iv.1901, C. V. Erlanger, 1 ♀; S. and S. E. Ethiopia, 1909—130, R. E. Drake-Brookman, 1 ♀. Holotype and two male paratypes in the NMN; allotype and six paratypes in the BM.

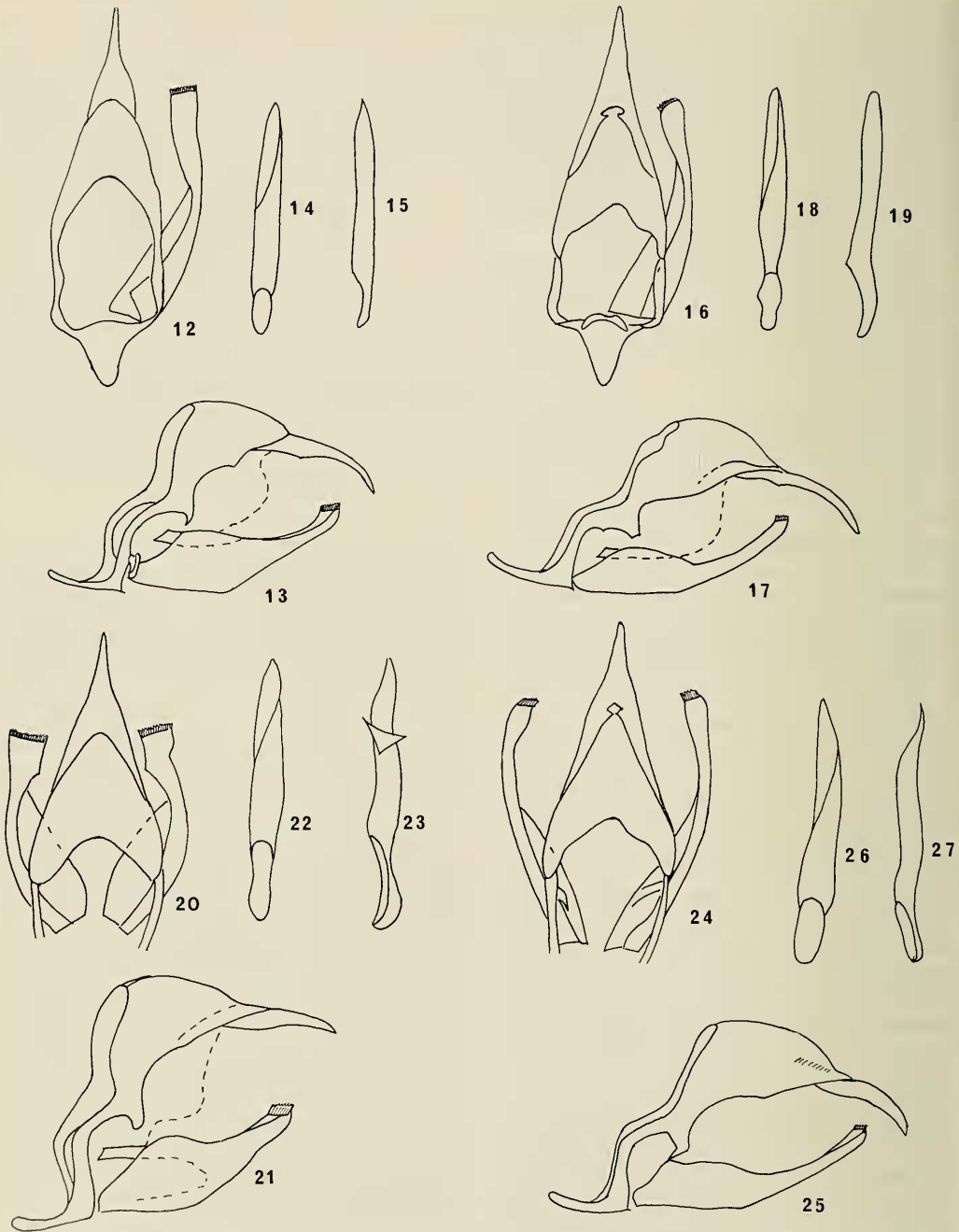
Ypthima congoana Overlaet stat. nova
(figs. 5, 24—27, 103, 146, pl. 8 figs. 1, 2, 4, 5)

Ypthima asterope congoana Overlaet, 1955b: 85, figs. 12a, 12b (Upemba, Katanga).

A male and a female paratype were kindly lent to me by Dr. L. Berger from Musée Royal de L'Afrique Centrale, Tervuren, Belgium. In all, two paratypes and one additional specimen from B.M. have been examined.

Y. congoana can safely be raised to specific status. The male and female genitalia differ from those of *Y. asterope*. The three specimens examined are larger than any of the *Y. asterope* of the corresponding sex I have seen.

External characters (pl. 8 figs. 1—2, 4—5). — Male. Antenna with 32 joints, brown, speckled and ringed white; club gradual, distinct and long, consisting of 14 joints; (the antennal club of the paratype is aberrant with a serrated club and abnormally long end joint); second palpal joint three times as long as the end joint. Upper-side f.w. ground colour dark brown; ocellar area and costa paler and clearly defined; the area from the hind margin, nearly up to vein 2 slightly paler than the ground colour. This is not pronounced in the second male. There is a dark



Figs. 12—27. Male genitalia of *Ypthima* species. 12—15, *Y. asterope asterope* Klug, typic; 12, dorsal aspect; 13, lateral aspect; 14—15, aedeagus in dorsal and lateral aspect. 16—19, *Y. asterope asterope* Klug, atypic; 16, dorsal aspect; 17, lateral aspect; 18—19, aedeagus in dorsal and lateral aspect. 20—23, *Y. yatta* species nova, Kenya; 20, dorsal aspect; 21, lateral aspect; 22—23, aedeagus in dorsal and lateral aspect. 24—27, *Y. congoana* Overlaet, paratype, Shifumanzi, Katanga; 24, dorsal aspect; 25, lateral aspect; 26—27, aedeagus in dorsal and lateral aspect.

marginal line; cilia, greyish white with a brown median line; h.w. ground colour as the f.w., but evenly distributed over the entire wing, perhaps slightly paler in the submarginal and the discal section; there is a faint discal and a clear submarginal line; an eye spot in 2. Underside of the wings greyish-white, closely and evenly striated brown; f.w. basal area darker in the paratype (not in the second specimen); the pale ocellar area clearly defined, the inner border thick, the outer thin; a fine dark margin; h.w. evenly striated, an indistinct discal band angled distad between vein 4 and 5, almost in a straight line from area 4 to the hind margin and from area 4 to costa; a double ocellar spot in 1b, one in 2 and one in 6; those in 2 and 6 of equal size, an indistinct submarginal band and a fine marginal line. Length of f.w. 17 mm in the paratype, 17.5 in the other male, antenna-wing ratio 0.47; higher than in *Y. asterope*.

Female. — Antenna with 35 joints; club 12 joints, the last a little longer than penultimate, conical. Upperside ground colour paler than in the male; f.w. brown and with no darker basal and median area; the ocellar area very clearly defined, surrounded by a dark brown border; a fine dark marginal line; cilia white with a thick, brown median line; h.w. with a faint discal line shining through from beneath (almost as in *Y. rhodesiana*); an irregular submarginal line, commencing almost at tornus, but turning slightly interiorly at vein 2; an ocellar spot in 2. Underside greyish, paler than in the male. (Both males are w.s.f., the female d.s.f.) F.w. ocellar spot and its area as in the male; the striation brown, in the h.w. nearly black, but very fine; a very fine, brown outer marginal line, followed by a thicker black line; the two lines separated by a white line; cilia as upperside; h.w. with three tiny eye-spots, a double in 1b, one in 2 and one in 6; the two marginal lines not so clear as in the f.w. (seen through a lens); the discal band as in the male, but more sinuate. Length of f.w. 19 mm, antenna-wing ratio 0.45.

Male genitalia (figs. 24—27). — Prep. nos. 850 and 1825K. Dorsal aspect: Valva more slender than the atypical form of *Y. asterope* from the Nairobi area and much more slender than normal *Y. asterope*; the distal end and processes as in *Y. rhodesiana*, but uncus narrower; appendix angularis of tegumen sharply bent interiorly at midway from its base. Lateral aspect: Tegumen a little longer than uncus, in *Y. asterope* shorter or equal; valva distal half narrow, only slightly flattened dorsad close to the apical pro-

cess; basal end short, with a dorsal bulge.

Female genitalia (figs. 103, 146). — Prep. no. 851. Genital chamber deep, square anteriorly, in *Y. asterope* shallow and rounded, no sclerotization of the frontal area; anterior plate totally different from that of *Y. asterope*, rounded, rather large and broad with finely serrated edge, roughish surface, poorly sclerotized; posterior plate of the same type as in *Y. asterope*, with a posterior, sclerotized broader part and an anterior tongue-like unsclerotized lobe.

Habitat. — Not known to author, but probably same as that of *Y. rhodesiana*.

Distribution (fig. 5). — Katanga in Zaire.

Ypthima rhodesiana Carcasson

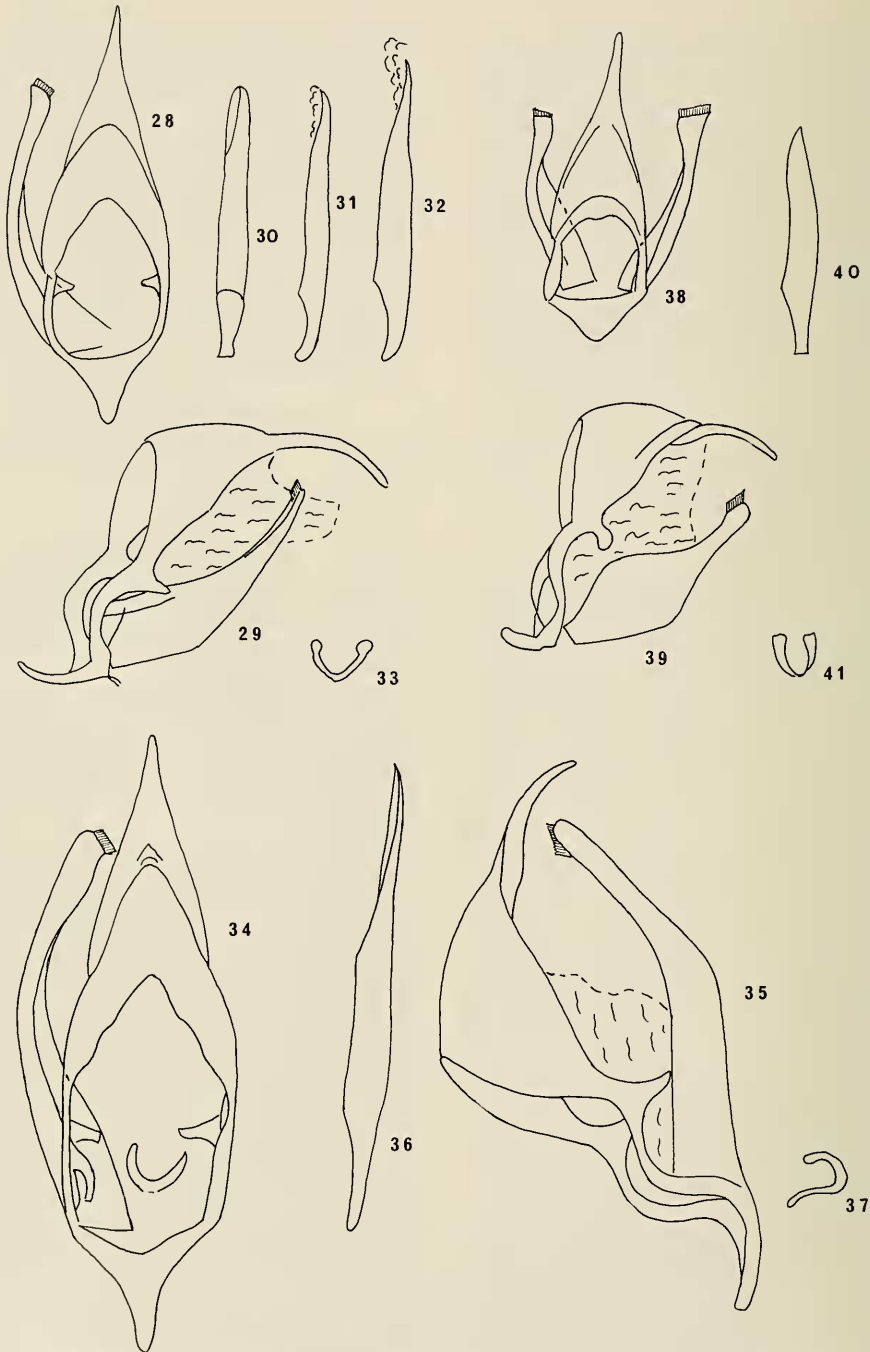
(figs. 6, 52—55, 105, 147—151, pl. 4 figs. 1—6)

Ypthima rhodesiana Carcasson, 1961: 14, fig. 11 (Choma, Zambia).

Related to *Y. asterope*, *Y. congoana* and *Y. condamini*. Differs in the underside h.w. discal band showing through on the upperside; the discal line much more evenly curved, almost parallel to the outer margin.

External characters (pl. 4 figs. 1—6). — Antenna male 34 joints, female 30 to 31 joints; shaft white below, blackish brown, sprinkled with white and white ringed above; palpi second joint two and a half times the length of the end joint.

Wet season form. Male. — Upperside ground colour variable, from pale to dark brown; f.w. ocellar area clearly defined, paler than the ground colour, with a dark border line all around, outdrawn towards tornus, but not extended over vein 2; submarginal area paler than the ground colour, margin darker; the median area a little paler in some specimens; cilia brown with a darker median line and paler tips; cilia of the h.w. almost white in the distal half; h.w. with a discal line, very clearly seen from beneath, a submarginal line, only slightly incurved in space 4 to 5; a marginal dark brown line. Underside ground colour pale gray, with even, brown striation; there is a blackish brown marginal line in both wing pairs; h.w. with a prominent discal line, almost evenly curved, but a little irregular from near vein 1b to vein 5, where it makes a gentle curve basad and with a small bend before reaching costa; the whole line is almost parallel to the outer margin; there is a less distinct submarginal line; ocellar spots in 1b, 2 and 6 are small and mostly without pupils; the spot in 2 nearly always with yellow ring, the



Figs. 28—41. Male genitalia of *Ypthima* species. 28—33, *Y. simplicia* Butler, Largido (Longido?), Tanzania; 28, dorsal aspect; 29, lateral aspect; 30—31, aedeagus of prep. no. 1832 in dorsal and lateral aspect; 32, aedeagus of prep. no. 1831 in lateral aspect; 33, juxta. 34—37, *Y. simplicia* Butler, syntype, Ethiopia; 34, dorsal aspect; 35, lateral aspect; 36, aedeagus, lateral aspect; 37, juxta. 38—41, *Y. asterope hereroica* Grünberg, S.W. Africa; 38, dorsal aspect; 39, lateral aspect; 40, aedeagus, lateral aspect; 41, juxta.

ones in 1b and 6 often without yellow ring and very small. Length of f.w. 15.8 to 18.5 mm, antenna-wing ratio 0.47.

Female. — Ground colour and markings as in the male; wings slightly broader; h.w. tornal angle more rounded, angled in the male. Length of f.w. 17 to 18.5 mm, antenna-wing ratio 0.44.

The d.s.f. exhibits very little difference from the w.s.f. The ocellar spots are reduced to tiny black points, often difficult to detect with the naked eye; the upperside ground colour is sometimes a little paler, particularly the median area in the f.w.

Male genitalia (figs. 52—55). — Prep. nos. 12, 15, 16, 19, 104, 429, 432—34, 436, 441, 544, 546, 549—50, 552, 2007 from Mpanda district, Tanzania; 868 from Kenya; 742A, 758A, 1839K from Rhodesia. Dorsal aspect: Uncus distal portion rather robust and blunt; accessory plates placed at the apex of valva, distal portion only slightly flattened as in *Y. congoana*. Lateral aspect: Uncus shorter than tegumen; vinculum strongly bent as that of *Y. asterope*; valva basal half rather robust, more than the length of the distal narrow portion; aedeagus as long as, or slightly shorter than valva.

Female genitalia (figs. 105, 147—151). — Prep. nos. 443, 449, 450 from Mpanda, Tanzania. Sinus vaginalis evenly rounded, wide, but not very deep, edge of anterior wall slightly wavy; lateral sclerites U-shaped; anterior plate small, bladelike, rounded, covered with fine tubercles, emarginated distad; posterior plate consists of a wide, cup-like and bipectinate heavily sclerotized posterior portion and a narrower, unsclerotized anterior part, formed as a tongue-like lobe; ductus wide and short; bursa rather large and longitudinally oval.

Note. — The male genitalia of *Y. rhodesiana* and those of *Y. congoana* are closely related, but the female genitalia show distinct and constant differences from *Y. congoana* in the anterior plate. Moreover, *Y. congoana* is a very local species.

Habitat. — *Brachystegia* woodland. Often flying together with *Y. condamini* sp. n.

Distribution (fig. 6). — From southern part of Kenya to Tanzania, Zambia, Rhodesia and south Zaire.

Ypthima simplicia Butler

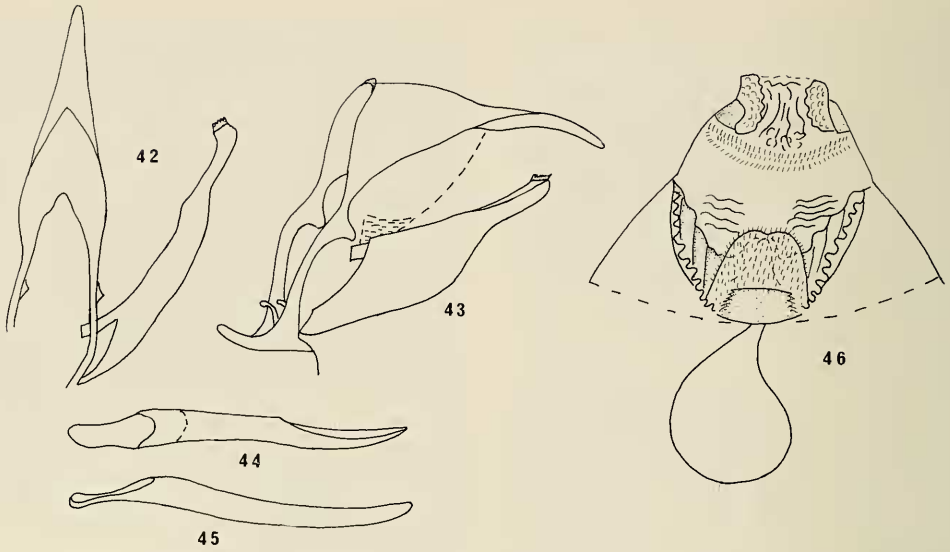
(figs. 6, 28—37, 127, 128, 173—178, pl. 2 figs. 7, 8, pl. 3 figs. 1—6)

Ypthima simplicia Butler, 1876: 481 (Ethiopia).

In the BM collection there are three males corresponding with Butler's *Ypthima simplicia*. One is labelled by him and is from the type locality. The two others are from Godman-Salvin collection, 1902—116, labelled "Abyssinia". A fourth specimen, also labelled by Butler and named *Y. simplicia*, belongs to *Y. impura*. This one and the other one labelled by Butler had previously been selected as syntypes of *Y. simplicia* (unpublished). However, as the first three specimens correspond best with Butler's description, I reject the one that belongs to *Y. impura* as syntype and select the other specimen labelled by Butler as lectotype. I have dissected the lectotype myself; the two other specimens had been dissected before and mounted dry, but they are good enough to be properly examined and undoubtedly they belong to the same species as the specimen which I have selected as lectotype of *Y. simplicia*. Any female type cannot be traced.

Description of the lectotype. External characters (pl. 2, figs. 7—8). — Antenna missing. Upperside ground colour greyish-brown; probably dark brown in fresh specimens; f.w. ocellar area almost as dark as the ground colour, encircled by a darker line; ocellar area slightly prolonged towards tornus; a pale yellow ring around the black, blue pupilled ocelli; a dark marginal stripe; cilia of both wings pale grey with a brown middle line and paler tips; h.w. uniformly brown without eye spots. (The two other specimens have an ocellar spot in area 2. This and the paler ocellar area of the f.w. are the only differences between the type and the two other specimens.) There is a fine, dark marginal line as in the f.w. Underside greyish white with somewhat uneven, brown striation; f.w. ocellar area as the rest of the wing and encircled by a brown ring slightly prolonged towards tornus; there is a clear, black marginal line; h.w. with two eye spots, one in area 2 and one in 6, almost of the same size; a faint discal line, more visible near costa as a blotch; a black marginal line as in the f.w.

Genitalia (figs. 34—37). — Prep. no. 736A. Tegumen-uncus resembling that of *Y. rhodesiana*, rather long and evenly tapering; valva slender, outer half of distal narrow portion gradually widening; accessory plate turned in and placed at an angle, approximately at 70° to the longitudinal axis of valva; aedeagus longer than valva; distal portion slender; apophyse angulare bent interiorly.



Figs. 42—45. Male genitalia of *Y. condamini* species nova. 42, dorsal aspect; 43, lateral aspect; 44—45, aedeagus, dorsal and lateral aspect. Fig. 46. Female genitalia of *Y. condamini* species nova.

In the BM collection there is a series from Ethiopia which corresponds with *Y. simplicia*, and I have examined rather fresh specimens collected in Ethiopia by S. C. Collins. As many of these specimens are in better condition and much fresher than the lectotype, it seems appropriate to describe them here.

External characters (pl. 3 figs. 1—4). — Antenna 29 joints, last joint as long as, or slightly longer than penultimate, creamy on the underside, brown on the upperside; palpi, last joint two and a half times the length of second joint.

Wet season form. Male. — Upperside ground colour sooty brown in fresh specimens, otherwise like lectotype. H.w. with an ocellar eye spot in 2; a dark submarginal line, incurved between vein 3 and 5; a fine dark marginal line. Underside ground colour of both wings rather dark grey with dark brown, evenly distributed striation, making the underside look darker than usual in the *Ypthima* here dealt with, almost as in *Y. recta*. The discal line in the h.w. is irregular and more or less indistinct; a black marginal line which is indistinct and patchy. Length of f.w. 17 mm, antenna-wing ratio 0.44.

Female. — Larger than the male; upperside ground colour slightly paler; ocellar area a little larger, otherwise the same markings. Underside of specimens from the same season as dark as in the males and with same markings, but ocellar spots smaller and in some there is also a double

spot in 1b. Length of f.w. 17.8 to 20.5 mm, antenna-wing ratio 0.38.

Dry season form. Male. — Upperside as the w.s.f. Underside f.w. differs little from the w.s.f., but h.w. usually with better developed markings and with much smaller ocellar spots; the discal line sharply produced at vein 4 and 5, incurved between 2 and 4, somewhat similar to *Y. asterope* from Natal. Length of f.w. 15.6 to 16.3 mm.

Female. — Little different from the w.s.f. Length of f.w. 15.5 to 16.5 mm.

Male genitalia (figs. 28—33). — Prep. nos. 697A—701A, 710A, 1741 from Ethiopia; 1822K, 1831K, 2271K from N. Tanzania; 1844K, 2273K, 2283 from Kenya. Dorsal aspect: Somewhat resembling an atypic form of *Y. asterope*, but accessory plate of valva strongly inclined, quite variable, but usually about 45° to 50° to the longitudinal axis of valva; fultura U-formed. Lateral aspect: Uncus as long as, or longer than tegumen; narrow portion of valva longer than wide portion; inner edge of narrow part very sharp, extending from inner edge of accessory plate almost the whole length of the narrow portion; aedeagus as long as, or longer than valva, straight dorsad, but distal half narrowed ventrally; vinculum moderately curved, less than in *Y. asterope*; apophyse angularis bent anteriorly. The accessory plate of the valva of the lectotype is less strongly inclined and the

sharpness of the inner edge of the narrow part of valva less pronounced and less extended. However, the specimens examined vary quite a lot with regard to these features.

Female genitalia (figs. 127—128, 173—178). — Prep. nos. 703A, 708A, 709A, 1743, 1832K, 1953K from Ethiopia; 2274 from Kenya; 2272K from N. Tanzania. Sinus vaginalis rather wide and deep with a rounded, frontal sclerotization; lateral sclerites widely U-shaped, broadening laterally; anterior plate heavily dentate laterally, bilobed distally and with a rather crumpled-looking middle section; posterior plate with a frontal, unscerotized part as usual and a posterior, lightly sclerotized part, shaped somewhat as in *Y. asterope*, but more heavily bilobed; anal lobes with small apophyses and uneven edges of 9th tergite; bursa obliquely ovoid.

Habitat. — Montane grassland and bush, according to S. C. Collins while collecting in Ethiopia. I have myself taken it in similar habitat at Ngong hill, near Nairobi in Kenya.

Note. — Butler (1888: 59) records *Y. simplifica* from Wadelai, Equatorial Africa, but this is doubtful and possibly a misidentification. Specimens not available.

The specimens from Longido and W. Kilimanjaro, Tanzania, and from Kenya differ somewhat from the Ethiopian specimens; with paler and more unevenly striated undersides and clearly defined discal and submarginal lines. The Kenya-Tanzania aggregate may belong to a separate race, but a very long series of specimens from both seasons is needed for description. The Tanzania-Kenya specimens are d.s.f.

Distribution (fig. 6). — Central and South Ethiopia, South Kenya, North Tanzania, and a few records from Sudan.

Ypthima condamini spec. nova

This new species is quite common in Mpanda, Kigoma and Ufipa in Tanzania and has also been collected by the author about 20 miles north of Tabora, Tanzania. In the NMN and BM there are specimens from Kenya and Uganda and in the BM also from Malawi, Zambia, a record from West Zaire and two from Angola, all of which belong to the nominate race. In the *Y. asterope* collection sent to the writer on loan by Dr. Vari (TMSA) there was one male *Y. condamini condamini* taken and dissected by Van Son from Wolkberg farm, Lotaba Drift, Transvaal.

Apparently the species is widely distributed in Africa and locally common, but it has often

been confused with the similar *Y. asterope*. The West African specimens are different from those of other parts of Africa and are distinguished as a separate subspecies.

Y. condamini frequently flies together with *Y. rhodesiana*, but can be separated from it by the underside h.w. discal line which is angled distad in space 4 to 5; in *Y. rhodesiana* the discal line is evenly rounded and almost parallel to the outer margin. The only certain means of separating it from *Y. asterope* is by examining the genitalia. This can be done just by brushing aside some abdominal hairs to expose the valva which differs from that of *Y. asterope* in the accessory plate placed at an angle and the valva itself with a dorsal convexity in the middle. This feature is apparent in only one more species, *Y. lamto*.

Ypthima condamini condamini subsp. nova (figs. 6, 42—46, 166, 167, pl. 4 figs. 7—14)

External characters (pl. 4 figs. 7—14). — Antenna 33 joints, shaft brown, with a whitish, longitudinal stripe; club gradual, only slightly thicker than the shaft, thinner than the club of *Y. asterope*, underside of each joint with large, but shallow double grooves; the last joint longer than the penultimate; palpi sprinkled with black and white hairs, second joint two and a half times as long as the last joint.

Wet season form. — Male. Upperside wings fuscous brown, a little paler in the apical half; f.w. ocellar area slightly paler than the ground colour, bordered by a clearly defined, dark line, most prominent distad; margin dark; cilia brown, finely white checkered; h.w., a spot in 2, a submarginal band, excurved in 4 and 5. Underside ground colour whitish grey with brown striation; f.w. ocellar area with a U-formed brown border, thickest below the eye-spot (the ocellar area varies individually in size and form); h.w. with one ocellar spot in 2 and a smaller one in 6; in one specimen from Sibweza, Mpanda, Tanzania, the spots are equal in size; there is a faint submarginal line and sometimes a discal and subbasal band. Length of f.w. 15.8 to 17 mm, antenna-wing ratio 0.44.

Female. Considerably larger than the male, with more rounded wings; slightly paler ground colour; f.w. ocellar area more clearly defined and paler. Length of f.w. 18.6 mm, antenna-wing ratio 0.39.

Dry season form. — Upperside similar to that of the w.s.f., except that the males have no spots in the h.w.; 50% of the females have a spot in

space 2, the rest none. Underside h.w. very different from that of the w.s.f.; eye spots reduced to tiny black points, hardly visible without a lens; there is a faint subbasal line and a prominent discal band; the discal band is clearer in the female; the submarginal line is hardly clearer than in the w.s.f. Length of f.w. male 15.5 to 16.5 mm, female 18.5 mm.

Male genitalia (figs. 42—45). — Prep. nos. 1, 11, 17, 18, 24, 25, 229, 430, 431, 461, 545, 548, 820, 821, 823, 1322, 1509, 1666, 1929, 2006 from Tanzania; 861, 2278K from Uganda; 722A, 723A from Malawi; 693A, 725A from Sudan; 731A from Angola; 1415, 1423 from W. Zaire. Dorsal aspect: Tegumen-uncus narrowing rather evenly to the blunt distal apex of uncus; the uncus is more solid than in *Y. asterope* and *Y. yatta*; valva robust, the narrow portion swung out and the apical accessory plate placed at a sharp angle, 45°. In *Y. asterope* the narrow portion continues the convex bend of the first part of valva and the shape becomes quite different from that of *Y. condamini*. Lateral aspect: Vinculum straighter than in other continental African *Ypthima* (in *Y. asterope* the vinculum is much shorter and very bent); uncus rather straight and robust, the narrow portion much shorter than the proximal, broad part, about one quarter of the length of valva; valva robust, distal narrow portion wider than normal, with a dorsal convexity, the shape close to valva of *Y. lamto* sp. n.; aedeagus longer than valva; saccus rather narrow.

Female genitalia (figs. 46, 166—167). — Prep. nos. 447, 448, 822, 824, 825, 1321 from Tanzania; 870 from Uganda; 694A, 695A from Sudan; 724A, 1838K from Malawi; 1827K from Zambia; 718A from Kenya; 729A from Angola. Very unlike *Y. asterope*. Anterior wall of sinus vaginalis reinforced with strong, longitudinal ribs and an anterior sclerotized plate with even edges; the rest of the wall's margin is wavy; there is a large, rounded and hairy anterior plate with a slight emargination at the distal end; a thinly sclerotized posterior plate, consisting of two parts, an anterior, unsclerotized tongue-like lobe and a slightly sclerotized and strongly wavy posterior plate. This is entirely fused to the likewise strongly wavy lateral sclerites, thus, with these forming a wavy wall or ribbon which is quite unlike the situation found in related species; ostium small; ductus short and bursa rather small, slightly obliquely shaped.

Habitat. — *Brachystegia* woodlands of higher and medium altitudes. In Tanzania found up to

2000 m as at Ufipa highlands and at about 700 m at Ruaha near Iringa. The flight is low and skipping between grasses.

Note. — In the d.s.f. there are two types of wing shapes, both in the male and the female. The commonest is the narrow type, but often there is also a type with considerably broader wings. The genitalia are constant in all and the two forms have been taken in the same habitats, so there is no possibility of subspeciation. The difference in the wing shape has also been mentioned by Overlaet in his description of *Ypthima (asterope) congoana*. It seems that the narrow wing type is confined to the d.s.f.

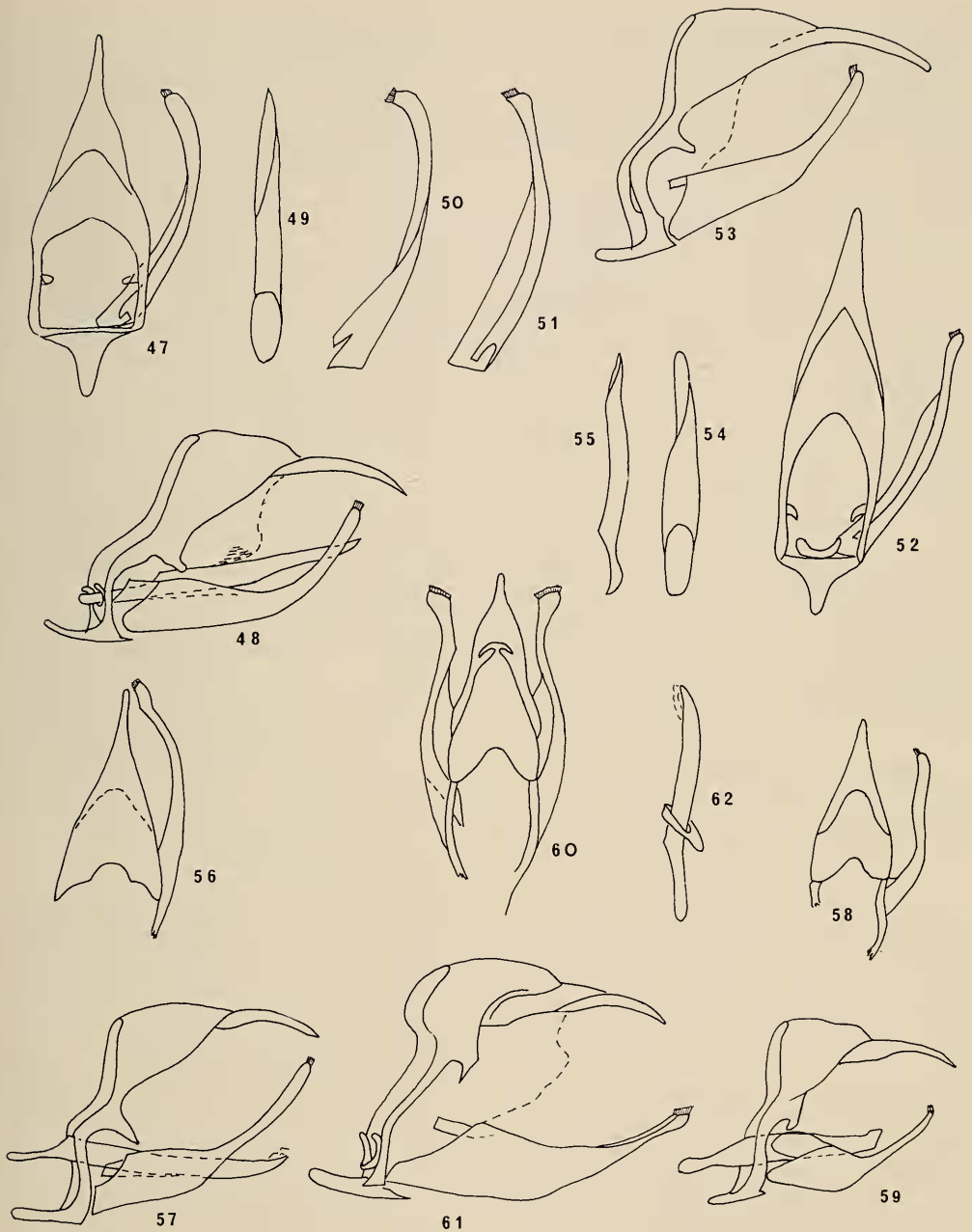
Distribution (fig. 6). — From North Ethiopia and South Sudan to East Africa, Zambia, Mozambique and Transvaal, and some records from West Zaire and North Angola.

Holotype ♂: Tanzania, Mpanda, Sibweza, 16.ii.1970, J. Kielland; Allotype ♀: Same data and collector, 4.i.1970; Paratypes: Same, but 31.vii.1961, 12.i.1970, 6.i.1970 and 28.ii.1969, 5 ♂; same, but Kanindi (Rukwa Valley), 5.x.1970, 2 ♂; Kigoma, Mgambo, 9.vi.1968, 1 ♂; Mpanda, Mbaya, 23.ix.1970, 1 ♀; Mpanda, Sibweza, 30.vi.1968, 1 ♀; Mpanda, Katuma, 2.iii.1967, 1 ♀; Mpanda, Ikaka, 7.ix.1978, 1 ♀, all J. Kielland; Uganda, Karamoja, Labwor Hills, Aremu, iii.1952, T. H. E. Jackson, 1 ♀; same, but West Madi, Metu, vi.1954, 1 ♀. Holotype and allotype in NMN; paratypes to NMN, BM and J. Kielland collection.

Ypthima condamini nigeriae subsp. nova
(fig. 6, pl. 4 figs. 15—18)

External characters (pl. 4 figs. 15—18). — Dry season form. Male. More pointed f.w. and smaller than both the dry and wet season forms of the nominate race; the upperside ground colour is considerably paler. Both the pointed wings and ground colour resemble the paler forms of *Y. rhodesiana*. The ocellar area is very distinct and bordered by a dark line; h.w. in some specimens with, and others without ocellar spot in area 2. Underside pale as in *Y. condamini condamini*; h.w. discal, subbasal and submarginal lines very sharply defined; the subbasal line more parallel to the discal line than in *Y. condamini condamini*, making an outward, sharp bend in the cell near the base of vein 2, corresponding with the bend in the discal line. This subbasal line is evenly rounded in the nominate race, when present. Length of f.w. 14.9 to 15.4 mm, antenna-wing ratio 0.44.

Female. Upperside as in the male, but larger;



Figs. 47—62. Male genitalia of *Ypthima* species. 47—51, *Y. antennata* van Son; 47, dorsal aspect; 48, lateral aspect; 49, aedeagus, prep. no. 536; 50, valva, prep. no. 875; 51, valva, prep. no. 858, Sudan. 52—55, *Y. rhodesiana* Carcasson; 52, dorsal aspect; 53, lateral aspect; 54—55, aedeagus, dorsal and lateral aspect. 56—57, *Y. vnat-touxi* species nova, paratype, Lamto, Ivory Coast; 56, lateral aspect; 57, dorsal aspect. 58—59, *Y. jacksoni* species nova, holotype, Mtwapa Creek, Mombasa, Kenya; 58, dorsal aspect; 59, lateral aspect. 60—62, *Y. lamto* species nova, Lamto, Ivory Coast; 60, dorsal aspect; 61, lateral aspect; 62, aedeagus, lateral aspect.

underside a little more suffused, with subbasal line less sharp. Length of f.w. 17.2 mm, antenna-wing ratio 0.40.

Wet season form. Male. Wings usually slightly more rounded than in the d.s.f.; underside paler. Length of f.w. 16 mm, antenna-wing ratio 0.43.

Distribution (fig. 6). — From Nigeria to Ghana, Upper Volta and Senegal.

Holotype ♂: Nigeria, Farniso near Kano, 25.iii.1919, A. Buchanan, d.s.f. Allotype ♀: Same data and collector. Paratypes: Same, but 20 and 25 December 1919, 2 ♂, d.s.f.; Niger, Borgu, Yelwa, 2.vii.1899, Wilson, 1 ♂, w.s.f.; Senegal, Badi, Niokolo Koba, 22.xi.1959 and 15—25.vii.1955, Mission IFAN, 2 ♂; same, but 18.i.1965, 1 ♀. Holotype, allotype and three paratypes in the B.M. collection; two males and one female paratypes in IFAN, Dakar.

Ypthima antennata Van Son

Antenna longer than in other continental African species and recognizable by the abrupt, short club; the club is of variable length, in some specimens almost circular, in others oblong, deeply grooved on the underside; palpi: third joint long and thin, second joint only one and a half times the length of the third joint.

Ypthima antennata antennata Van Son

(figs. 7, 47—51, 104, 152—155, pl. 5 figs. 1—4)

Ypthima antennata Van Son, 1955: 156, pls. 5—6 figs. 86, 87 (Munnik, N. Transvaal).

External characters (pl. 5 figs. 1—4). — Antenna male 31 to 37 joints, female 32 joints, black and white ringed. Wet season form. Male. Wings, upperside uniformly dark greyish brown in fresh specimens; f.w. ocellar area slightly paler than the ground colour, but with a distinct, darker border all the way around, in most specimens not reaching vein 2; margin finely black bordered; cilia greyish with a dark median stripe; h.w. with a very faint, uneven submarginal band close to the margin, excurved in 4 and 5; some specimens without any trace of eye spots, others with one spot in 2. Underside ground colour whitish grey with uneven, brown striation; f.w. basal portion a little paler than the rest of the wing; the ocellar border distinct; h.w. with two ocellar spots of even size, in 2 and 6, sometimes also one in 1b; a subbasal band, thickened and protruding distad as a W in 4 and 5; a submarginal band, rather far from the

margin; no lines between this and the margin, only normal striation.

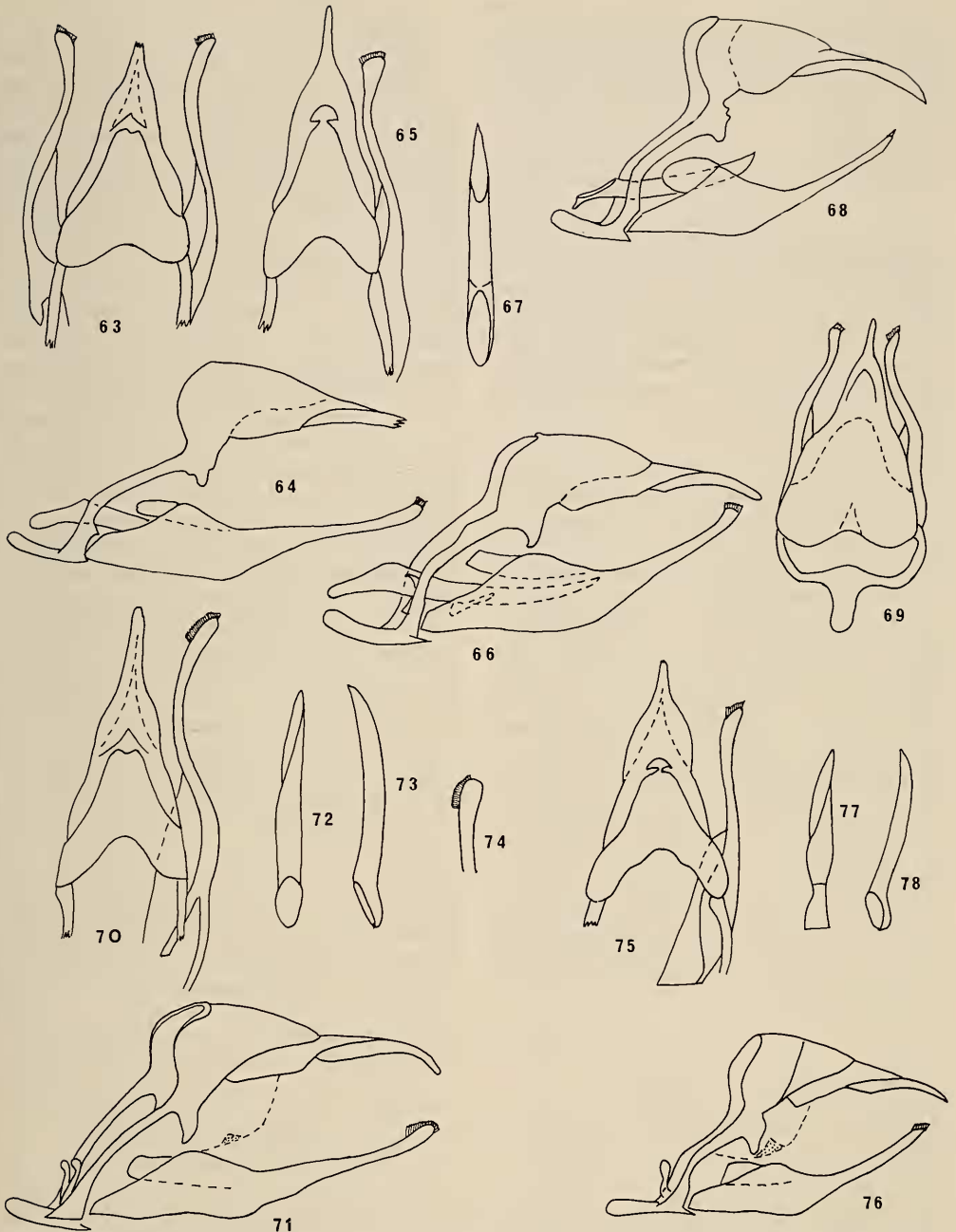
Dry season form. Very little difference from the w.s.f.; underside eye spots in the w.s.f. only slightly larger. Length of f.w. 14.3 to 17 mm, antenna-wing ratio 0.47.

Female. Antennal club more oblong than that of the male. Underside wings slightly paler than in the male; f.w. subapical eye spot larger, more rounded and clearly defined, reaching vein 2; h.w. markings as in the male, some without and others with an ocellar spot in 2. Underside f.w. ocellar area and its border as on the upperside; h.w. markings as in the male. Length of f.w. 18 to 19 mm, antenna-wing ratio 0.45.

Male genitalia (figs. 47—51). — Prep. nos. 9, 346, 537, 783 from N. Tanzania; 370, 387, 536, 547, 555, 881 from W. Tanzania; 869, 1965 from Uganda; 858, 859, 751A from Sudan; 1865, 1866, 1912 from Kenya. Dorsal aspect: Tegumen rather wide at base, narrowing towards its junction with uncus, which is of normal width at base and basal half, then narrowing to a slender distal portion; appendix angularis of tegumen bent interiad; valva strongly curved interiad in an even line from base to apex; a small apical process. Lateral aspect: Dorsal outline of tegumen concave in the middle; uncus slender from base to apex; valva slender, broadest near base, tapering to the sharply upturned distal portion; aedeagus as long as valva, the basal third thin, the middle section thick, then tapering to a sharp, upturned point.

Female genitalia (figs. 104, 152—155). — Prep. nos. 560 from Uganda; 1197, 1826K from Malawi; 561, 784, 880 from Tanzania. Confusingly similar to *Y. asterope*. Sinus vaginalis rather shallow, but slightly wider than in *Y. asterope*; the anterior wall evenly and broadly U-shaped; anterior plate small, longer than broad, bilobed distally, but the shape slightly variable; in the specimens from W. Nile, Uganda, its distal part is broadest, in the specimen from Seronera, Tanzania, no. 784, it is parallel-sided; posterior plate usually wider than that of *Y. asterope*, but in *asterope* it also varies in width and depth; like in *Y. asterope* there is a central, unsclerotized lobe; the lateral sclerites are U-shaped and connected to the posterior plate; ductus moderately long and wide; bursa slightly larger than in *Y. asterope*.

Habitat. — Mainly open grassland with scattered trees. Frequently taken in rocky places of sandstone formations, settling on rocks.



Figs. 63—78. Male genitalia of *Ypthima* species. 63—67, *Y. recta* Overlaet; 63—64, dorsal and lateral aspect of prep. no. 849, paratype, Kafakumba, Katanga; 65—67, dorsal and lateral aspect, and aedeagus of prep. no. 724, Lamto, Ivory Coast. 68—69, *Y. granulosa* Butler, atypic, Kakamega, Kenya; 68, dorsal aspect; 69, lateral aspect. 70—74, *Y. granulosa* Butler, coastal type, prep. no. 852, Kakamega, Kenya; 70, dorsal aspect; 71, lateral aspect; 72—73, aedeagus, dorsal and lateral aspect; 74, distal end of valva, prep. no. 1413, Kitwi, Kenya. 75—78, *Y. granulosa* Butler, inland type, prep. no. 853, Kakamega, Kenya; 75, dorsal aspect; 76, lateral aspect; 77—78, aedeagus, dorsal and lateral aspect.

Distribution (fig. 7). — Widely distributed over most of the eastern part of Africa; from Transvaal in South Africa to Rhodesia, Mozambique, Central Zambia, western and northern part of Tanzania to West Kenya, Uganda and South Sudan.

Ypthima antennata cornesi subsp. nova
(fig. 7)

Amongst a small collection kindly sent to me for examination by Mr. M. A. Cornes, Lagos, Nigeria, a male and a female proved to belong to a distinct race of *Y. antennata*. While examining the collection of *Ypthima* in the BM, a few more specimens from Nigeria were found.

External characters. — Antenna male 31 joints, female 30 joints; shaft and club as in *Y. antennata antennata*.

Wet season form. Male. Differs from the nominate race in the f.w. subapical ocellar area, which is less rounded and more drawn out towards tornus; tornus itself more sharply angled and the outer margin stands almost perpendicular upon the inner margin (the outer margin is much more sloping in ssp. *antennata*). H.w. outer margin less convex, nearly straight; f.w. submarginal line closer to the ocellar ring. Underside, wings evenly striated; in ssp. *antennata* the striation is very uneven in both seasonal forms and the h.w. bands are much more clearly indicated. The underside of ssp. *cornesi* is very close to that of *Y. asterope*; the eye-spots in 2 and 6 are very large and there is a small spot in 1b. Length of f.w. 14.8 mm, antenna-wing ratio 0.53; much higher than in the nominate race.

Female. Paler than the male and with more rounded wings and larger eye-spots on the f.w. Otherwise it differs from the nominate race as does the male. Length of f.w. 15.5 mm, antenna-wing ratio 0.49.

Male and female genitalia. — As in ssp. *antennata*.

Distribution (fig. 7). — Nigeria.

Holotype ♂: North Nigeria, Benue Plateau, Jos, June 1968, M. A. Cornes. Allotype ♀: Same data and collector.

Notes. — I have the pleasure in dedicating this new race to its collector, Mr. M. A. Cornes of the NSPR Institute, Lagos, Nigeria. Holotype and allotype to NSPRI collection.

While this paper was in press, additional records were received from Mr. Usher, York, of the occurrence of this subspecies in Ghana (see fig. 7).

Ypthima jacksoni spec. nova
(figs. 7, 58, 59, 125, 126, pl. 3 figs. 5—8)

External characters (pl. 3 figs. 5—8). — Antenna 29 joints; upperside shaft brown, sides greyish-white and underside brown and grey checkered; club gradual, distinct; the underside of each joint with two narrow grooves, the end joint as long as penultimate; second palpal joint one and a quarter times as long as the third joint.

Male. Upperside, wings greyish-brown (fresh specimens are most certainly darker); ground colour and markings hardly distinguishable from *Y. asterope*; the ocellar area clearly defined and slightly paler than the ground colour; costa striated; the section between the yellow ring and submarginal line is paler; submarginal line (ocellar border) narrow, dark brown; margin darker than the submarginal area; cilia brown; the cilia of *Y. asterope* are basally whitish, then brown and tipped white; h.w. uniformly greyish-brown; a small ocellar spot in 2; a faint submarginal line and a dark margin. Underside f.w. distinguishable from *Y. asterope* in the entire area being almost uniformly striated; the usually dark anal area, common in *Ypthima* species, is grey like the ground and with fine, brown striation; h.w. paler and uniformly striated with brown; without subbasal and discal lines; a very fine, mottled, dark brown margin; ocellar spots small, but entire; there is a double pupilled spot in 1b, one in 2 and one in 6. Length of f.w. 14 to 14.7 mm, antenna-wing ratio 0.45.

Female. Ground colour a little paler than in the male; wings more rounded and larger. Upperside f.w. with a large ocellar area, larger than in the male; a brown border surrounding the area as in the male, but its proximal part near costa forming a nearly 90° angle; costa striated as in the male; h.w. with a small ocellar spot in 2 and a tiny one in 1b; a clear submarginal line, rather irregular; a dark brown margin; cilia brownish grey with a distinct, median line. Underside f.w. striated as in the male, but the brown border of the ocellar area as on the upperside, except the part parallel to costa which is very thin and indistinct; a black marginal line; h.w. not paler than the f.w.; there is a clearly defined discal line almost parallel to the margin; a less clear subbasal line; both lines fairly evenly curved; near apex there is a blotch which is placed on edge, more clearly seen on the right wing; there is a submarginal line which looks

uneven due to the striation; a double spot in 1b, one in 2, 5 and 6. Length of f.w. 16 mm, antenna-wing ratio 0.38.

Male genitalia (figs. 58—59). — Prep. nos. 534, 596, 705A, 738A, 739A, 2270. Dorsal aspect. Tegumen-uncus gradually tapering towards the distal end of the uncus; valva slender, sinuate; apical accessory plate small, situated on the innerside, pointing up and placed 45° to the longitudinal axis of valva. Lateral aspect. Uncus a little longer than tegumen; vinculum only slightly bent; saccus short; valva furnished with a large costal process; basal part of valva short and broad, narrow portion very slender with distal end upturned; aedeagus very robust, longer than valva, with the distal end blunt and upturned.

Female genitalia (figs. 125—126). — Prep. nos. 735A, 2269. Peculiar; lateral sclerites short with weak sclerotization; genital plates unsclerotized; anterior plate small, rounded and dentate along the edges; posterior plate formed like a rounded sack; sinus vaginalis with a small, oval frontal sclerotization; anal lobes comparatively large, without apophyses.

Habitat. — Judging from distribution, both humid and dryer woodland formations.

Distribution (fig. 7). — Kenya; coast near Mombasa, Teita; Ethiopia at Kata Mane river, Darolli Arussi Galla.

Holotype ♂: Kenya, Mombasa, Mtwapa Creek, iv.1950, E. Pinhey; Allotype ♀: Ethiopia, Kata Mane Riv, 27—31.iii.1901, C. V. Erlanger; Paratypes: Kenya, Samburu, 12.x.1911, T. H. E. Jackson, 1 ♂; British Central Africa, Masongaleni, 26.ix.1911, no name, 1 ♂; Kata Mane, 27.iii.1901, C. V. Erlanger, 1 ♂; Ethiopia, 1909—130, B. E. Drake-Brookman, 1 ♂. Holotype to NMN; allotype and paratypes to BM.

I have the pleasure in naming this species after one of its collectors, the late Mr. T. H. E. Jackson.

Ypthima vuattouxi spec. nova
(figs. 7, 56, 57, 110, pl. 5 figs. 5—8)

Four males and one female of this species from Lamto, Ivory Coast, were sent to the author on loan by Dr. M. Condamin, IFAN, Dakar. Later I found several males and females in the BM collection from Gambia, Nigeria and Cameroun.

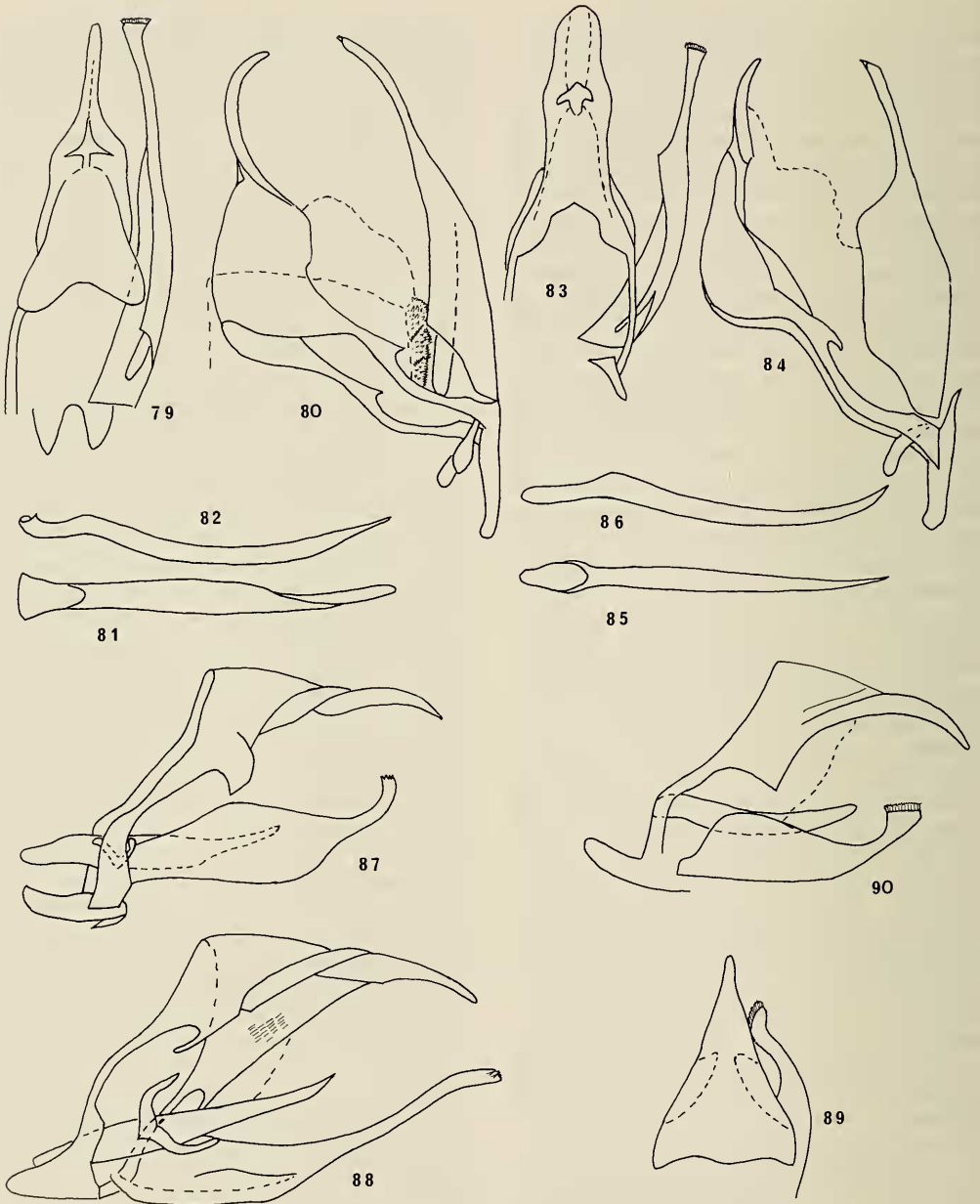
Diagnosis. — Closely related to *Y. jacksoni*. Genitalia differ in valva being more evenly bent and not sinuate; basal wide portion differently

shaped and uncus thinner. Differs from *Y. lamto* in upperside ocellar area being without, or nearly without striation. Underside f.w. tornal area not, or slightly darkened; female genitalia differ strikingly, as shown in the figure.

External characters (pl. 5 figs. 5—8). — Antenna 33 joints, brown above, whitish below, faintly ringed with white on the shaft; club gradual, but clearly defined, consisting of 10 joints, 11th going over into the shaft; the underside of the joints double-grooved, the last as long as the penultimate; palpi second joint nearly twice as long as the last joint, curved, fawn, dorsal hairs mainly white.

Male. Upperside wings brown, slightly speckled with grey, particularly the area around the h.w. ocellar spot in 2, as seen through a lens; f.w. ocellar area distinctly bordered with dark brown; the ocellar and submarginal area paler than the ground colour; in one paratype the extension of the black central area intrudes into the pale yellow ring, forming a tiny eye spot with trace of a blue pupil in space 3 (this is only an individual variation); the ocellar area is fairly evenly rounded with slight extension towards tornus; cilia greyish with a median, brownish stripe on both wings; h.w. with an ocellar spot in 2 and a small, single pupilled spot in 1b; in some specimens this is lacking or very faint; a submarginal, dark band and a fine marginal dark border as in the f.w.; the submarginal band is slightly excurved in 4 and 5. Underside grey, finely striated with brown in both wings; f.w. ocellar area evenly striated as the rest of the wing, bordered with brown, open towards costa, the dark border area extended towards tornus; one large subapical ocellus, in one paratype also a small, black pupilled one in 2; h.w. with one double pupilled spot in 1b, one in 2 and one in 6. Length of f.w. 14.5 mm, antenna-wing ratio 0.46.

Female. Upperside rather similar to a small *Y. asterope*; larger than the male; antenna 32 joints, end joint shorter than penultimate; otherwise like that of the male. Upperside wings brown, slightly paler than in the male; f.w. ocellar area larger and paler; costa granulated; h.w. with one ocellar spot in 2; a faint, dark submarginal band, slightly widened in 4. Underside similar to that of the male, or slightly more greyish and f.w. ocellar area a little larger; h.w. submarginal band widened, slightly darkened and excurved in 4; cilia greyish with a prominent, brown median line. Length of f.w. 16 mm, antenna-wing ratio 0.42.



Figs. 79—90. Male genitalia of *Ypthima* species. 79—82, *Y. impura* Elwes & Edwards; 79, dorsal aspect; 80, lateral aspect; 81—82, aedeagus, dorsal and lateral aspect. 83—86, *Y. pupillaris* Butler, Nigeria; 83, dorsal aspect; 84, lateral aspect; 85—86, dorsal and lateral aspect of aedeagus. 87, *Y. diplommata* Overlaet, holotype, Kafakumba, Katanga. 88, *Y. praestans* Overlaet, holotype, Tshiolo, Sankuru, Zaire. 89—90, *Y. doleta* Kirby; 89, dorsal aspect; 90, lateral aspect.

Male genitalia (figs. 56—57). — Prep. nos. 697, 1233, 1234, (986 Condamin prep.) from Ivory Coast; 1836K from Cameroun; 1841K from Nigeria. Closest to *Y. jacksoni* sp. n. Dorsal aspect: Tegumen wide basally, narrowing towards uncus which tapers evenly into a long, narrow apical portion; differs in this aspect from that of *Y. jacksoni*; valva very long, slender and evenly curved (not sinuate) from base towards apex; just before apex it makes an outward, sharp bend, angled on the inner side; the small apical accessory plate is placed at an angle of about 45° to the longitudinal axis of valva. Lateral aspect: dorsal outline of tegumen evenly curved, the portion above appendices angulares narrowly constricted; uncus very slender; valva much longer than the combined length of tegumen-uncus; the thicker basal part rather narrow, shorter than the length of the very slender distal portion, aedeagus very long, as long as, or longer than valva; the basal open part very slender, abruptly thickening about 1/5 distance from extreme base; the rest robust, almost parallel, except for the distal upcurved point; sacculus longer than in *Y. jacksoni*.

Female genitalia (fig. 110). — Prep. no. 987, Condamin prep. from Ivory Coast. Sinus vaginalis wide, not very deep; anterior plate very wide and large, slightly emarginated at its distal border, one and a quarter times as wide as the posterior plate, which also is large, as wide as long and trilobed distally; both plates are rather weakly sclerotized. In Condamin's preparation it looks like the posterior plate consists of two portions, the one described above and an anterior, unsclerotized, tongue-like process, as in most species of *Ypthima*. The ductus and bursa are not visible; the anal lobes are rectangular and evenly outlined as those of *Y. asterope*.

Habitat. — Savanna.

Distribution (fig. 7). — Lamto, Ivory Coast; Ghana, Nigeria and Cameroun (records received while this paper was in press).

Holotype ♂: Ivory Coast, Lamto (Toumodi), 8.ii.1967, R. Vuattoux. Allotype ♀: Same locality, 12.iv.1965, S. Kwamé. Paratypes: 3 ♂ from same locality, 11.ii.1968, R. Vuattoux; 25.ii.1965, 29.ii.1965, S. Kwamé.

Note. — The specimens are all typical w.s. forms.

Ypthima lamto spec. nova

(figs. 8, 60—62, 136, 163—165, pl. 5 figs. 9—14)

Dr. Condamin, IFAN, Dakar, kindly pre-

sented to the author some specimens from Ivory Coast belonging to this species and later sent a large series for examination. Later a male from Cameroun was presented by Mr. J. Plantrou.

External characters (pl. 5 figs. 9—14). — Antenna 34 joints, (in the related *Y. granulosa* Btl. 30 joints), greyish with a dark, brown-grey checkered line dorsally, ending at the last joint; shaft rather thick, very gradually thickening into the club which is broadest four joints from the apex; the club is orange, except for the dorsal stripe; underside is double-grooved for nearly the full length of the joints; palpi second joint two and a half times the length of the third joint, rather straight.

Male. Upperside strikingly similar to *Y. granulosa*, particularly to the coastal form; f.w. fuscous brown, ocellar area outdrawn towards tornus and thickly striated with dark brown, clearly dark bordered on either side; submarginal area slightly lightened with grey, a double marginal line, the outer dark brown, the inner less clear; the subternal area of same dark brown as the submarginal line; cilia greyish brown with a darker median line; the double pupilled subapical ocelli with brownish-yellow ring. In some males the ocellar area is of paler striation and of larger extent towards margin and tornus. Normally the ocellar striation reaches the middle of area 2 and the submarginal line is situated in the middle between margin and the yellow ocellar ring; in some specimens the ocellar striation reaches vein 2 and beyond; h.w. ground colour as in the f.w.; the only markings are the single ocellar spot in 2, a dark submarginal line, incurved in 4 and 5 and a less clear, irregular median line; the submargin is slightly paler; cilia as in the f.w. Underside grey with dark, olive-brown striation, almost as in *Y. pupillaris*; f.w. ocellar area bordered with dark brown which continues in the subternal area, reaching tornus; both wings with a black margin, bordered inside by a line of the same shade as the greyish ground colour; cilia grey with a dark median line; h.w. with an uneven, dark submarginal line, incurved and widened in 4 and 5; a fairly clear, but uneven median line and an indistinct subbasal line; four ocellar spots, two in 1b, one in 2 and one in 6; the one in 2 a little larger, but sometimes the one in 2 and 6 are equal and in others the ocellus in 6 is larger, the two in 1b are a little smaller. Length of f.w. 14.5 to 16 mm, antenna-wing ratio 0.36.

Female. Ground colour paler than that of the male, the whole surface more or less striated;

the f.w. ocellar area paler, striation more spaced, extending further towards tornus; the submarginal bands in both wings, the h.w. median band and the brown ocellar ring more clearly defined; h.w. discal area slightly paler than the basal area and striation clearly defined; submarginal area pale and striated; underside marked and striated as in the male, but striation more spaced, giving it a much paler appearance. Length of f.w. 16 to 17.5 mm, antenna-wing ratio 0.37. Slightly higher ratio in the female than in the male, which is unusual.

Dry season form. There is no typical d.s.f. in the numerous specimens examined from Lamto. Amongst the paratypes three males and one female approach this form with very small eye spots on the h.w. underside, but are otherwise similar to the w.s.f. I was informed by Dr. Condamin that Lamto is situated close to the rain forest area with very short dry season and is, therefore, unlikely to produce typical d.s. forms.

Male genitalia (figs. 60—62). — Prep. nos. 690, 695, 699, 728, 1233, 1247, 1248, 1261—63, 1276, 1278 from Lamto, Ivory Coast; 1726 from Cameroun. The whole appearance of the genitalia similar to that of *Y. recta*. Tegumen and uncus also resembling those of *Y. granulosa*. Dorsal aspect: The basal part of uncus rather flattened dorso-ventrally and the appearance wide in dorsal view; valva sinuate, with the distal part of narrow portion widened and outer margin making a strong outward bend; distal part of inner margin straight. Lateral aspect: The narrow portion of uncus laterally compressed and forming a V in cross section; shorter than the narrow portion of the uncus in *Y. recta*; appendices angulares of tegumen bent, with apices converging towards each other; valva robust, two slight concavities ventrad, one on each side of the median bend, dorsally convex at junction of thick and narrow portion; aedeagus shorter than valva; diaphragma unsclerotized.

Female genitalia (figs. 136, 163—165). — Prep. nos. 691, 693, 1241, 1252—54, 1265—67, 1277 from Lamto, Ivory Coast. Sinus vaginalis wide and rather deep; anterior plate large and broad, distally dentate with a shallow median emargination; posterior plate unsclerotized, consisting of a broader posterior part and a tongue-like anterior section; ductus short and wide; bursa small, obliquely pear-shaped.

Habitat. — Savanna country, according to Condamin.

Distribution (fig. 8). — Lamto and Tiassale, Ivory Coast, and Mbalmayo, Cameroun.

Holotype ♂: Ivory Coast, Lamto (Toumodi), 29.vi.1965, S. Kwamé. Allotype ♀: Same, but, 13.vii.1967, R. Vuattoux. Paratypes: w.s.f. 20 ♂, same locality, but 20.vi.1964, 21.vi.1965, 26.vi.1964, 12.iv.1965, 18.iii.1965, 20.vi.1965, 29.vi.1965, 17.vii.1965, 27.ii.1965, 19.iii.1965, 16.vii.1965, 10.vii.1965, 27.ii.1964, 4.viii.1965, 17.viii.1965, S. Kwamé. 13 ♀, same locality, but 23.iii.1965, 27.iii.1965, 25.iii.1965, 29.iii.1965, 2.v.1965, 29.vi.1965, 17.vii.1965, 11.viii.1965, S. Kwamé; 4.x.1967, R. Vuattoux; 19.iii.1964, M. Condamin; 2.iv.1962, C. Bigot. Paratypes approaching to d.s.f.: 3 ♂, same, 8.i.1968, R. Vuattoux; 7.ii.1946, M. Condamin; 25.iii.1965, S. Kwamé; 1 ♀ same, but 7.ii.1964, M. Condamin. Holotype, allotype and the bulk of the paratypes to be returned to IFAN. Other paratypes in NMN and J. Kielland collection.

Ypthima recta Overlaet

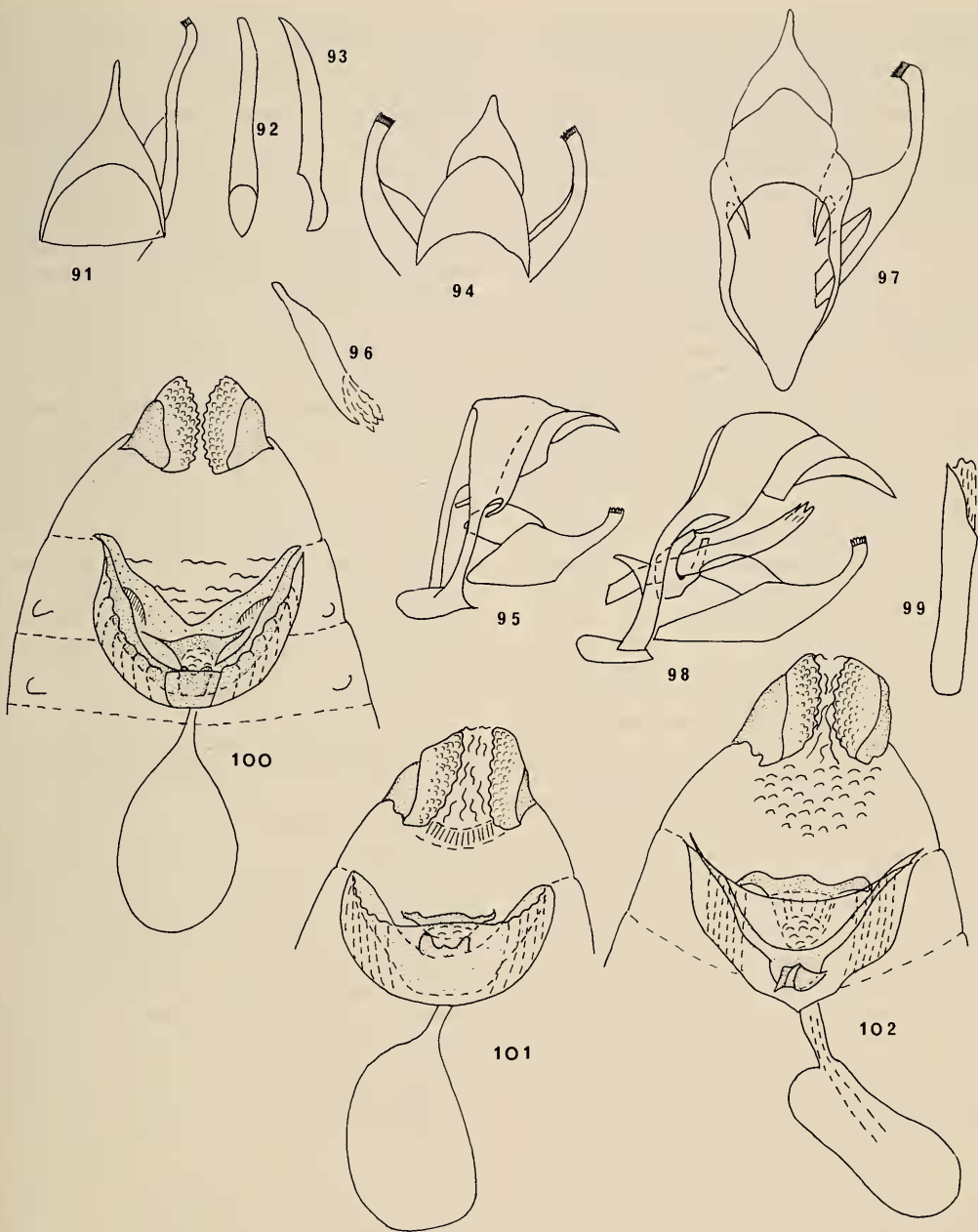
(figs. 8, 63—67, 121—124, pl. 5 figs. 15—18, pl. 8 figs. 3, 6)

Ypthima recta Overlaet, 1955: 87, figs. 25a, 25b (Upemba, Zaire).

This species may easily be mistaken for *Y. granulosa*, but the underside is usually darker. It also resembles dark forms of *Y. simplicia* in external characters.

External characters (pl. 5 figs. 15—18, pl. 8 figs. 3, 6). — Antenna 36 joints, shaft and club pale brown; shaft white ringed dorsally, club gradual, end joint longer than penultimate; second palpal joint two and a half times the length of the last joint, nearly straight, first joint equals the last joint in length.

Male. Upperside, wings dark brown (fresh specimens); f.w. ocellar area striated, only slightly paler than the ground colour, extended towards tornus to vein 1b; there is a double marginal line, rather wide apart and a submarginal line midway between the ocellar spot and margin, in some specimens slightly closer to the margin; h.w. with an ocellus in 2, a discal band outwardly dentate in area 3 and excurved in 5, a submarginal line, incurved between vein 3 and 6 and a double, marginal line as in the f.w. Underside striated all over as in *Y. granulosa*; the f.w. ocellar area clearly indicated by a darker border, in a few specimens indistinct, thickest on the inner side; the area is of the same shade and striation as the rest of the wing; there is a double marginal line, in some specimens the inner line



Figs. 91—102. Male (91—99) and female (100—102) genitalia of *Ypthima* species. 91—93, *Y. pulchra* Overlaet, paratype, Kafakumba, Katanga; 91, dorsal aspect; 92—93, aedeagus, dorsal and lateral aspect (prep. P. Muteshi). 94—96, *Y. albida* Butler, Kibondo, Tanzania; 94, dorsal aspect; 95, lateral aspect; 96, aedeagus, lateral aspect. 97—99, *Y. albida uniformis* Bartel, Zaire; 97, dorsal aspect; 98, lateral aspect; 99, aedeagus, lateral aspect. 100—102, *Y. asterope* Klug; 100, Somalia, typic; 101, Kiambitti Hill, Kenya, somewhat atypic; 102, Yatta, Thika, Kenya, highly atypic, particularly the folded anterior plate, which is flattened in the drawing.

is indistinct due to the striation; h.w. with a double spot in 1b, in some specimens also a spot in 5, situated proximad of a line drawn between the spot in 2 and 6; a discal band as on the upperside and an irregular subbasal line which is indistinct in many specimens; an indistinct submarginal line and marginal lines as in the f.w. Length of f.w. 17.2 to 17.7 mm, antenna-wing ratio 0.44.

Female. Larger than the male; wings slightly more rounded; upperside ground colour a little paler; f.w. ocellar area wider, a little paler, reaching close to the hind margin; otherwise markings as in the male. Length of f.w. 18.7 mm, antenna-wing ratio 0.36.

Male genitalia (figs. 63—67). — Prep. nos. 849 from Katanga, Zaire; 1698, 1699, 1703, 1704, 1706, 1708, 1710, 1711 from Ngara, Tanzania; 2003, 2042, 2285, 2286 from Angola; 1876 from Endebes, Kenya. Similar to *Y. granulosa*, particularly the coastal form. Dorsal aspect: Tegumen medium broad, uncus broad in basal half, then abruptly narrowing to the thin apical portion; valva long, slender and sinuous, apical portion broadening and turned out; the process is wide and prominent, placed at about 70° to the longitudinal axis of valva, sloping interiorly. Lateral aspect: Appendices angulares of tegumen turned interiorly; valva broadest one third from base, tapering towards base and towards the apical narrow portion which is long and slender, slightly upturned at apex; aedeagus shorter than valva.

Female genitalia (figs. 121—124). — Prep. nos. 387 from Elizabethville, Zaire; 860 no date label; 1701, 1702 from Ngara, Tanzania. Genital chamber deep, squarely formed; lateral sclerites extremely broad and tapering to a point proximad; anterior wall with a sclerotized frontal area, broad dorsad, tapering ventrad; anterior plate wide and short with serrate margin in paratype, but the plate is variable, although always uneven or serrate and wide, sometimes very wide; in no. 860 trilobed apically; posterior plate tongue-like, sclerotized and not clearly seen, very wide at base (the shape of the posterior plate is constant); ductus wide and short; bursa small, obliquely ovoid.

A single male from Lamto, Ivory Coast presented to the author by Dr. M. Condamin, differs so much from typical *Y. recta* that it deserves to be remarked upon. The upperside sooty brown; f.w. ocellar area entirely without striation and the whole insect extremely like *Y. impura* Elw. & Edw. and *Y. pupillaris* Btl.; the

only external distinction may be the submarginal dark line which is situated closer to the margin than to the middle of the distance from margin to the ocellar yellow ring; in *Y. impura* and *Y. pupillaris* the line is either closer to the eye spot, or placed in the middle. Underside with strongly indicated ocellar dark border on the f.w., reaching 1b; h.w. with a subbasal, an inner discal, a faint outer discal and a submarginal band; there is a double marginal line, the inner blackish; the ocellar spots are very small, a double one in 1b, one tiny spot in 2 and one in 6. Genitalia as in *Y. recta*.

Note. — It might be suggested that the coastal form of *Y. granulosa* is identical with *Y. recta*. However, this is out of the question as the female genitalia of the two differ considerably. Moreover, the fore leg of the female in *Y. recta* is much reduced; tarsi one-jointed, fusiform; tibia bent in the middle, as long as the tarsi; femora thicker, but only a little longer than the tibia. In *Y. granulosa* the female fore leg is well developed as usual.

Habitat. — Woodland and open grassland of rather humid climate. Often at margins of evergreen forests.

Distribution. — See fig. 8.

Ypthima granulosa Butler

(figs. 8, 68—78, 106—109, 160—162, pl. 6 figs. 1—8)

Ypthima granulosa Butler, 1883: 101 (Victoria Nyanza, Tanzania).

Ypthima cataracta Van Son, 1955: 154, pls. 5, 6, fig. 81 (Rhodesia), syn. nov.

Ypthima asterope ab. *inocellata* Strand, 1909: 112 (Uluna-Langenburg).

Ypthima asterope ab. *triozellata* Strand, 1909: 112 (Langenburg, N. Nyassa).

Ypthima asterope ab. *biocellata* Strand, 1909: 112 (Dar es Salaam, Tanzania).

Ypthima asterope ab. *interrupta* Strand, 1909: 113 (Dar es Salaam).

Ypthima asterope ab. *uniocellata* Strand, 1909: 113 (Dar es Salaam).

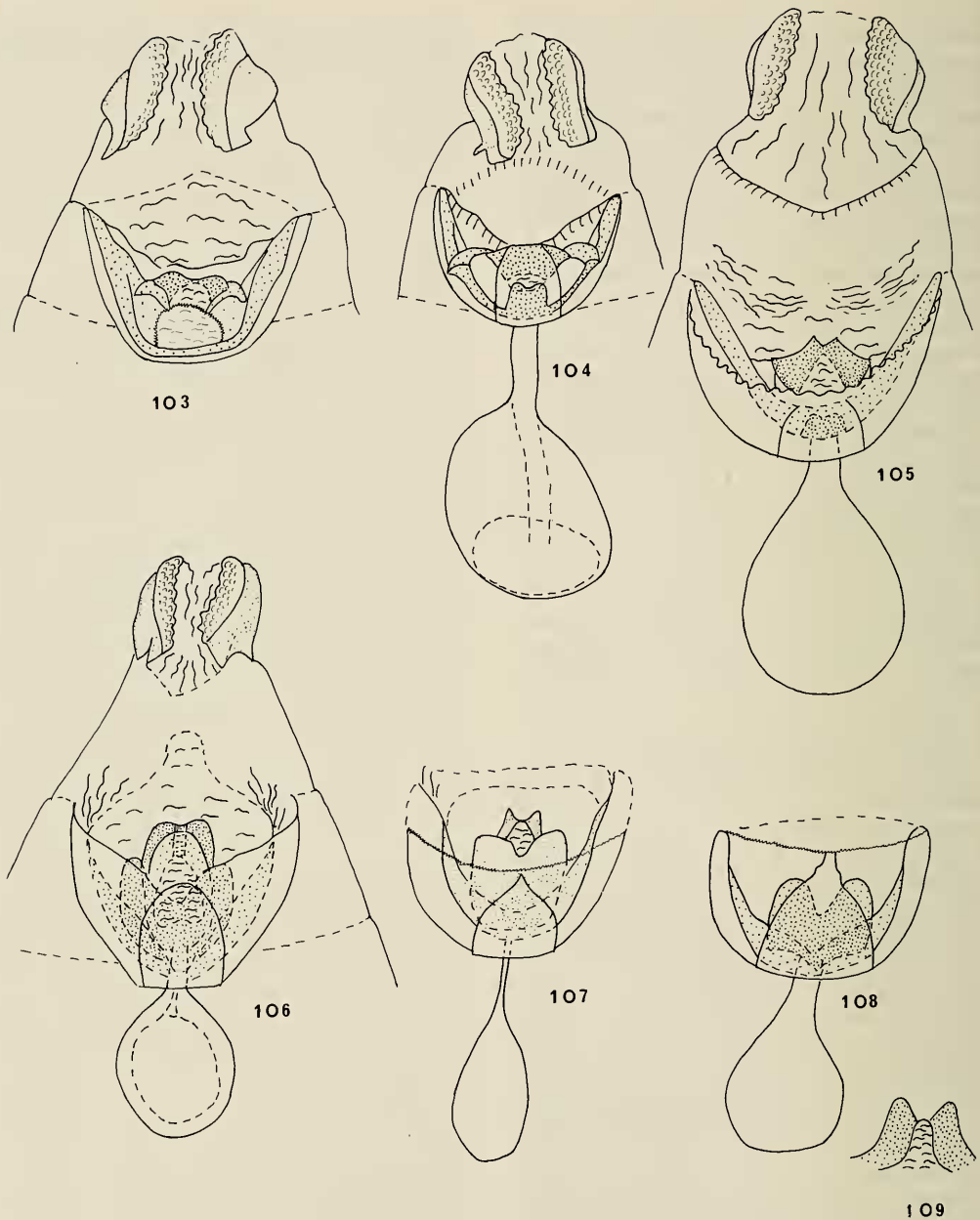
General remarks. — As mentioned before, the types of Strand's aberrations of *Y. asterope asterope* were destroyed during the war of 1939—1945. To identify specimens from descriptions only, is very difficult, due to the variation of *Ypthima* within a given species and this makes it difficult to analyse Strand's descriptions with certainty. However, due to the circumstances stated below, we must presume that the above aberrations do not belong to *Y. asterope*, but are forms of *Y. granulosa*, common in

coastal areas of East Africa and also occurring in several places inland. Personally, I have collected hundreds of *Ypthima* in the coastal areas of Tanzania and examined other collectors' specimens, all from areas mentioned by Strand regarding *Y. asterope*. All of these turned out to be *Y. granulosa* and *Y. impura*. *Y. asterope* ab. *biocelligera* and *Y. asterope* ab. *binucholata* probably also belong to *Y. granulosa*, but are vaguer and Strand's series could consist of other species as well and should not be included here. Strand (1909: 113) says about ab. *interrupta* "Hinterflügel unten mit 6 ocellen, ----". This corresponds with a form of *Y. granulosa* which also occurs at Dar es Salaam (the type locality of *Y. interrupta*). It has small ocellar spots on the h.w. underside; even in the wet season the spots are small, although quite perfect with rings and pupils. The d.s.f. has from four to six minute black spots. Strand's ab. *uniocellata* of *Y. asterope* corresponds well with the d.s.f. of *Y. granulosa*. He says: "Hinterflügel unten mit 5 bis 6 winzig kleinen Ocellen (die in den Feldern 4 und 5 zum Teil ganz rudimentär und die innere der beiden am Analwinkel gelegene Ocellen nur durch ein schwarzes Pünktchen angedeutet.)" This specimen was also taken at Dar es Salaam. *Y. asterope* ab. *inocellata* is another d.s.f. of *Y. granulosa* of the inland with darker underside. *Y. asterope* ab. *triozellata* and *Y. asterope* ab. *biocellata* are also forms of *Y. granulosa* with two or more ocellar spots on the upperside h.w. This is often the case with the atypical form of *Y. granulosa*, described below. Further, Van Son (1955: 163) mentions that he had a species from Mozambique which he correctly thought was *Y. granulosa* (in fact the coastal form). He also says that he has seen genitalia drawings made by Elwes & Edwards of a species from Zanzibar which also resembles *Y. granulosa*. It may therefore seem curious that Van Son did not recognize his species *Y. cataracta* as *Y. granulosa*. There is a specimen in NMN from Dondo, Mozambique resembling Strand's *interrupta* and van Son's description of the specimens he saw from Mozambique. His description of the genitalia also resembles that of the coastal form of *Y. granulosa*, which differs somewhat from the typical, or inland form (figs. 70—74). The two forms of *Y. granulosa*, differing both in genitalia and size and also often in facies, are indeed confusing and it led me to think that they were two separate species, but extensive dissections of both my own and NMN material revealed that there were intermediates and al-

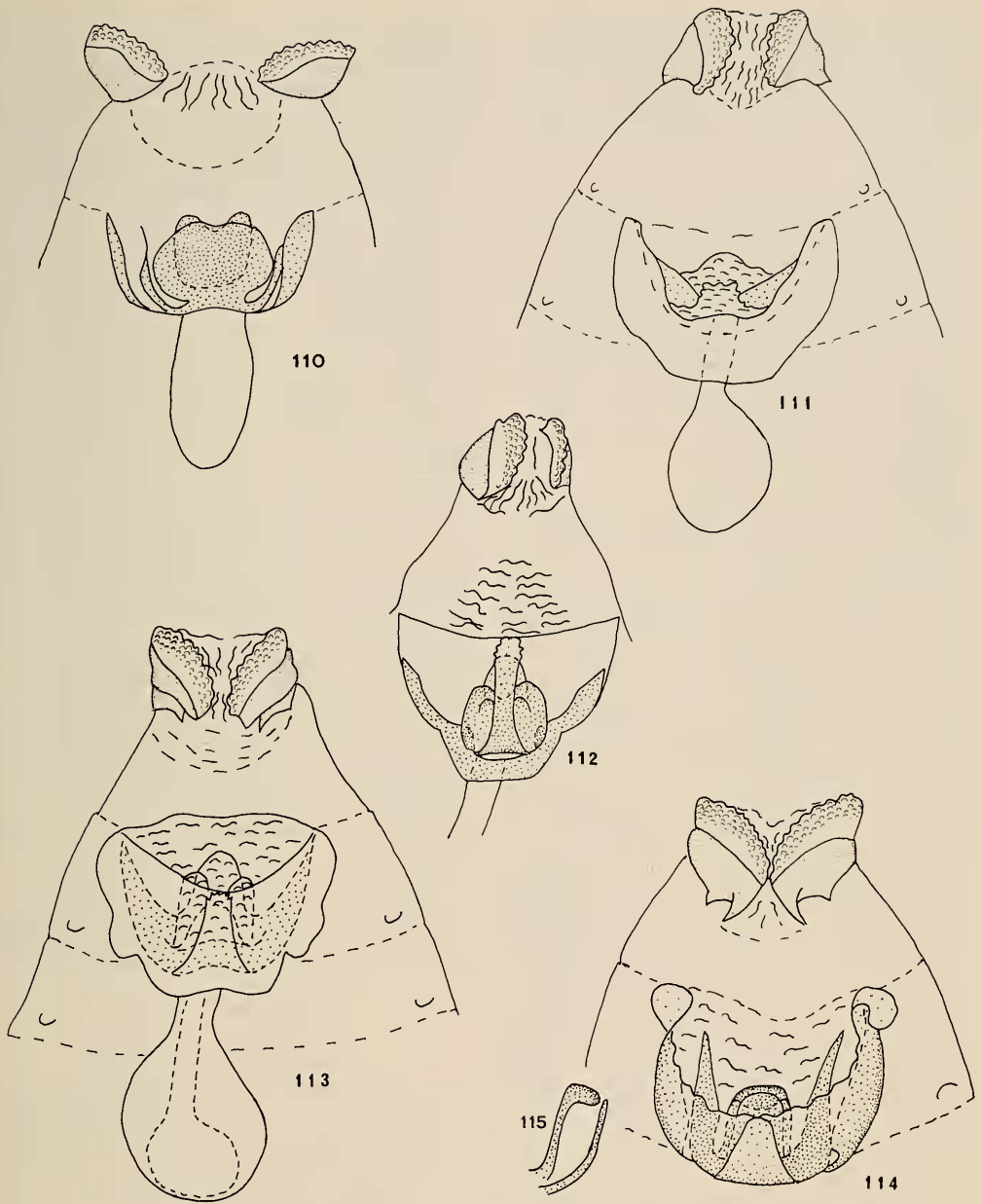
though the female genitalia varied to some extent, they did not vary in accordance with other characters. Sometimes this is also the case with the male. Therefore, it must be presumed that the two forms belong to the same species. They cannot be separate races, as the two fly together in most areas. The larger form, though, is by far the commonest along the coastal belt, inland to Morogoro, while the smaller form is much more common further inland.

External characters (pl. 6 figs. 1—8). — Antenna short, 28 to 30 joints; shaft brown, white ringed, end joint much longer than penultimate; club long and distinct; palpi very long, brown and white hairs, sprinkled with white.

Typical form. Mainly inland. — Wet season form. Male. Upperside wings fuscous brown; the subapical ocellar area triangularly shaped, not as clearly defined as in *Y. asterope* Btl., more like *Y. yatta*, but to a varying degree; faintly striated, more or less drawn out towards tornus as in *Y. lamto*; the submarginal area with same palish shade as the distal half of the ocellar area; the size of the ocellar spot is variable, but with few exceptions smaller than in *Y. asterope*. H. w. mostly with an eye-spot in 2, but in some specimens there is no trace of any spots; there is a faint indication of a discal and a submarginal band; margin as in the f.w.; cilia in both wings brown with a darker median line. Underside f.w. very variable; in some specimens the ocellar area is rather clearly defined by a dark line which in some specimens is thin, in others thicker, but in some specimens the area is more or less obscured, particularly on the distal side; in most, the apex is much paler than in the rest of the wing, due to a fine striation, which is also extended to the rest of the wing, but more scattered; however, in others, the basal part, up to the end of the cell, has the same degree of striation and shade as the apex, in a few, almost the entire wing, but the area between the eye-spot and the hind margin is always darker and less striated; there is a blackish marginal line; the h.w. is finely granulated; there is a very uneven discal band, sharply protruding distad in area 3 to 4 and in some specimens also in 5; the rest of the band is very wavy; there is a likewise uneven, but generally fainter submarginal band. The variation of the unevenness seems to correspond with the size of the ocellar spot in space 2; in specimens with a large spot, the submarginal line in this area is pushed closer to the margin; there is a marginal line as in the f.w.; normally there are four ocellar spots, two in 1b,



Figs. 103—115. Female genitalia of *Ypthima* species. 103, *Y. congoana* Overlaet, paratype, Elisabethville, Zaïre; bursa missing. 104, *Y. antennata* van Son, Serengeti, Tanzania. 105, *Y. rhodesiana* Carcasson. 106—109, *Y. granulosa* Butler; 106, prep. no. 1012, Tabora, Tanzania; 107, prep. no. 460, Kenya; 108, prep. no. 871, Kivu, Zaïre, posterior plate removed; 109, posterior plate of prep. no. 871. 110, *Y. vuattouxi* species nova, allotype, Lamto, Ivory Coast (prep. Condamin). 111, *Y. albida* Butler. 112—113, *Y. doleta* Kirby; 112, Abijan, Ivory Coast; 113, Katera Sango Bay, Masaka, Uganda. 114—115, *Y. pulchra* Overlaet, paratype, Landoa, Lualu River, Katanga; 115, anterior and posterior plates in lateral aspects.



one in 2 and one in 6; the size of the ocellar spots is very variable even in specimens from the same season; in some they are tiny, while in others quite large, particularly in 2 and 6; there are a few specimens with only one small spot in 2 and some with a spot in 5 and others in 3 as well, all together six spots; cilia as on the upper-

side. Length of f.w. 15.5 to 17.7 mm, antennawing ratio 0.36. There is one male from Kenya with ratio 0.40. Otherwise the highest measured is 0.38 and the lowest 0.35.

Female. Upperside paler than in the male and with more widely spaced striation; ocellar area paler and larger and more clearly defined; h.w.

as in the male, but slightly paler. Underside much paler and with more widely spaced striation than in the male; otherwise similar. The underside of the female has an affinity to that of female *Y. recta*, but the specimens are usually smaller. Length of f.w. 17 mm, antenna-wing ratio 0.35.

Dry season form. This varies very little from the w.s.f. in East Africa; the underside h.w. ocellar spots are always small, sometimes tiny or lacking, except for a tiny spot in space 2. Van Son (1955) describes the d.s.f. from Rhodesia as being slightly different from those occurring in East Africa. In specimens from Rhodesia there is no trace of any eye-spots on the h.w. This is probably due to the somewhat more arid climate in Rhodesia so that d.s.f. becomes more extreme.

Atypical form. Mainly coastal. — Fore legs, antenna and palpi as in the normal form; f.w. ocellar area paler and more clearly defined, less difference between male and female; h.w. discal and submarginal bands rather prominent. Underside generally paler with more widely spaced striation, as in the females; the specimens are slightly larger on the average.

Male genitalia (figs. 75—78) (typical). — Prep. nos. 132, 377, 397, 399, 879, 888, 928, 1697, 1700, 1705, 1707, 2289 from Tanzania; 375, 1914 from Rhodesia; 385, 398, 853—855, 925, 927, 1413, 1738 from Kenya; 386 from Uganda; 1414 from Burundi; 2000, 2001, 2037 from Botswana; 2004 from Angola. Dorsal aspect: Basal portion of uncus wide, wider than in *Y. recta*; the narrow portion comparatively short, almost as in *Y. lamto*; valva narrow portion more or less curved interiad and distal portion pointing away, but not as much as in the atypical form; accessory plates situated distad and generally not extended along the inner margin of valva; aedeagus short, less than two third of the length of valva, constricted at the distal end of the open, basal portion; the extreme base straight (seldom rounded). Lateral aspect: Dorsal outline of tegumen-uncus rather straight; wide portion of valva shorter and not so robust as in *Y. lamto*; narrow portion sharply pointed upwards and much longer than in *Y. lamto*; a slight concavity on each side of the ventral bend; diaphragma with a rectangularly shaped sclerotization ventrad of anus; saccus fairly long and narrow; basal portion of aedeagus sharply bent ventrad.

Female genitalia (figs. 106—109, 160—162). — Prep. nos. 460, 1483, 1667—69 from Tanza-

nia (coastal); 921 from Uganda; 1012—15 from Singida, Tanzania; 1412 from Malawi; 1917 from Rhodesia. Sinus vaginalis deep, a sclerotized anterior section of the anterior wall, which is finely dentate along the edge; anterior plate very large, broad and deeply incised at the distal middle, with a rounded lobe on each side; posterior plate consists of two parts, the foremost almost unsclerotized, tongue-like and pointed distad; the posterior section sclerotized, more or less incised at the distal middle; this part of the genitalia varies as shown in the figures. The lateral sclerites U-shaped, rather thick at base, gradually tapering towards the proximal ends; ductus fairly wide, rather short; bursa oval and straight; colliculum large and oval.

Male genitalia (figs. 68—69) (atypical). — Prep. nos. 219, 342, 344, 924, 1484—86 from Tanzania; 920 from Mozambique; 871 from Kivu, Zaire; 874 from Zambia; 852 from Kenya; 371, 376, 926, 929, 930, 932 from Uganda. It seems necessary also to describe the atypical form of the male genitalia. Tegumen-uncus longer than normal; uncus narrower, distal portion longer; valva narrow portion strongly curved interiad, with distal end pointing away; the accessory plate in most specimens extended along the inner edge of valva; aedeagus not constricted and open portion evenly rounded. Lateral aspect: Valva long and sinuate; aedeagus slightly longer than normal.

Intermediates between typical and atypical forms occur.

Habitat. — Open, deciduous woodlands.

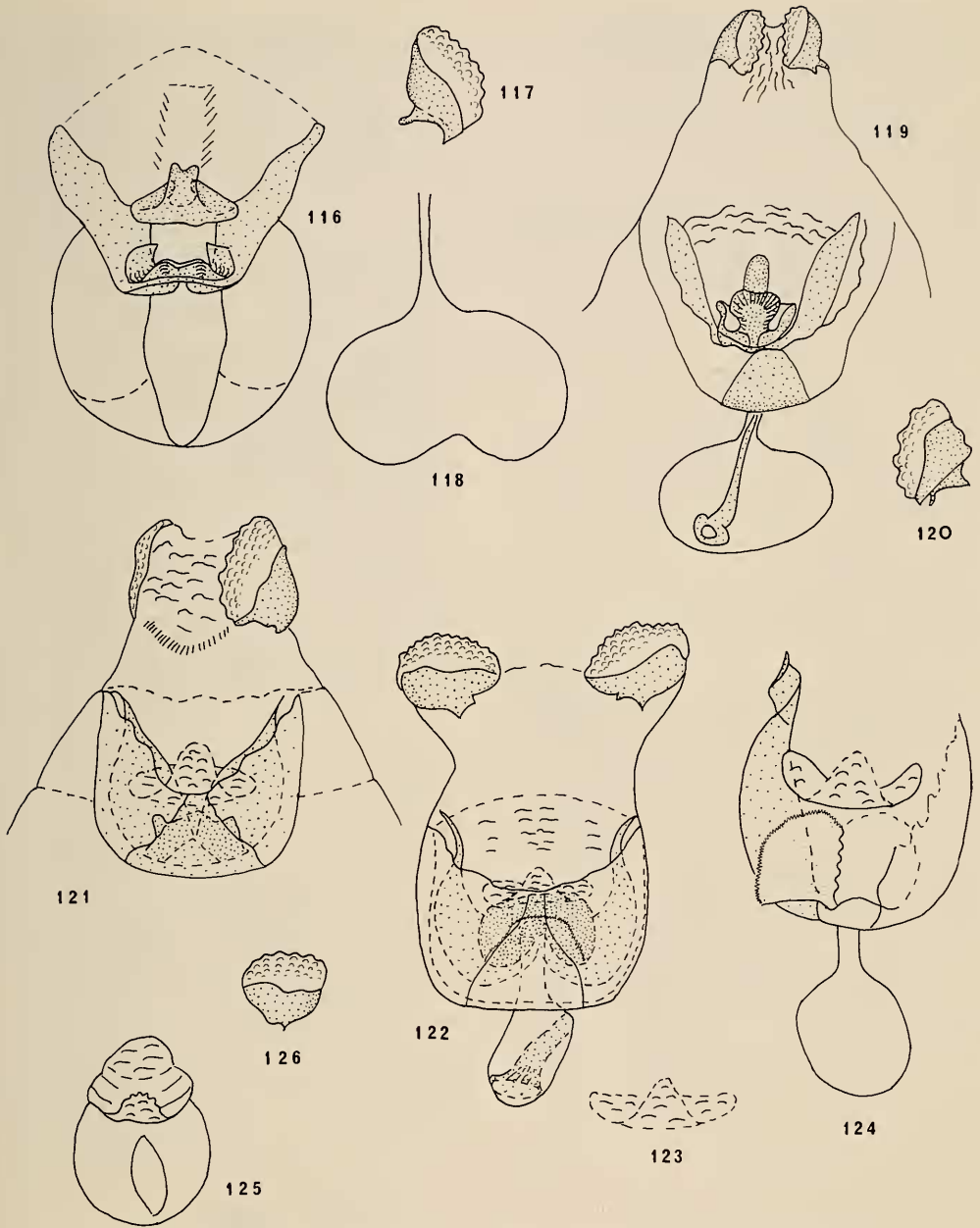
Distribution (fig. 8). — East Africa to Malawi, Zambia, Rhodesia and northern Botswana and a few records from the eastern part of Zaire.

Ypthima pupillaris Butler

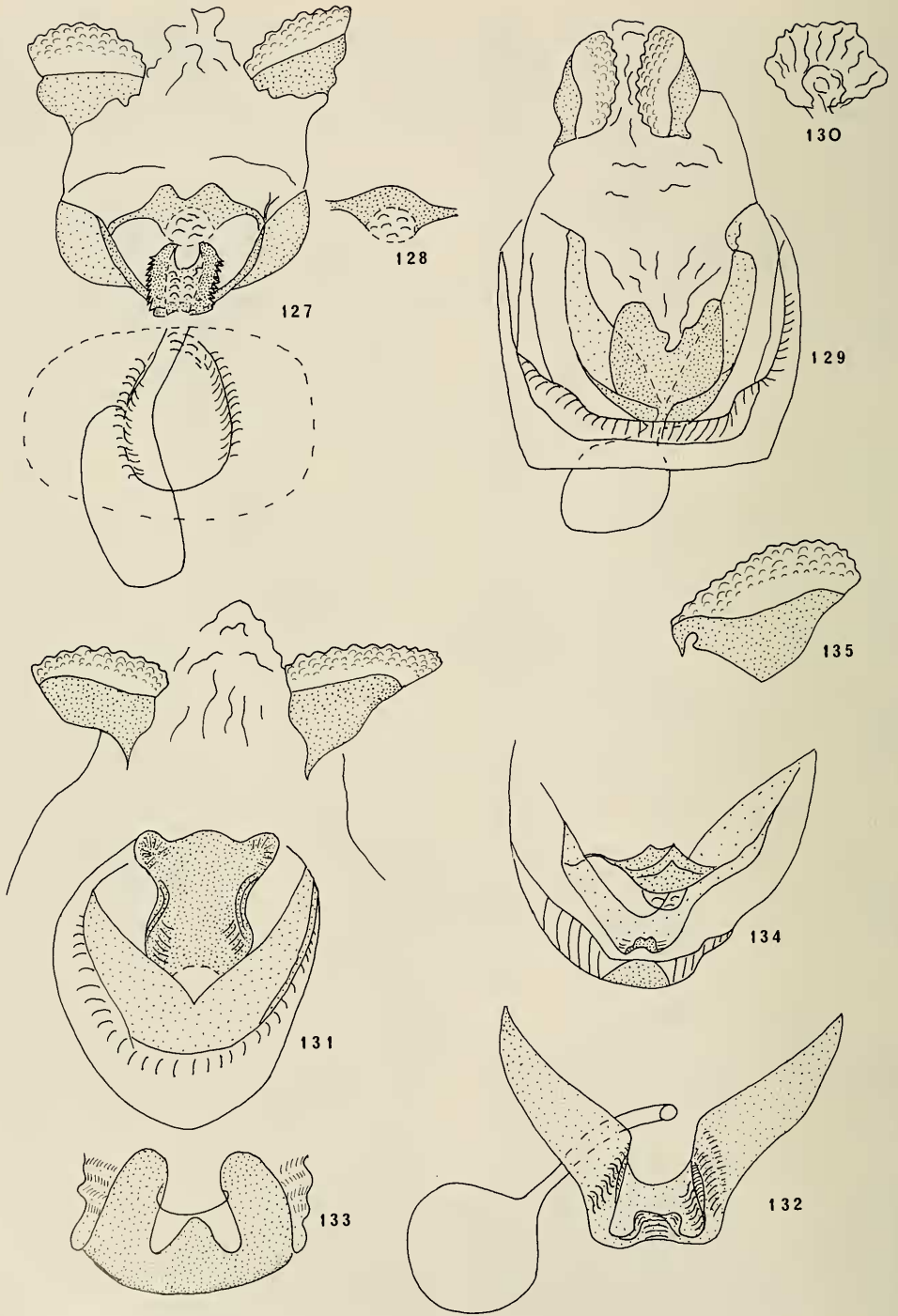
and

Y. impura Elwes & Edwards

These two species are in most cases extremely similar, and before I attempt to describe them, I would like to make the following remarks. Both are represented by two races. The nominate race of *Y. pupillaris* occurs in South Africa and the western part of Africa north to Senegal and *Y. pupillaris obscurata* in eastern Africa. *Y. impura impura* is West African and its race *paupera* occurs from South Africa to East Africa and Ethiopia. Previous authors have often confused the two species with each other. This confusion is, I think, due to the very great variability of *Y. impura*, both in size, markings and coloration. It is quite interesting to notice that *Y. impura*



Figs. 116—126. Female genitalia of *Ypthima* species. 116—118, *Y. pupillar* Butler, Ivory Coast; 116, sinus vaginalis flattened down, with genital plates and lateral sclerites; 117, left anal lobe; 118, bursa with ductus. 119—120, *Y. impura* Elwes & Edwards, Ivory Coast; 119, ventral aspect; 120, right anal lobe in lateral aspect. 121—124, *Y. recta* Overlaet; 121, prep. no. 860; 122, prep. no. 1382; 123, posterior plate detached; 124, prep. no. 887, paratype, Elisabethville, Zaire, part of genitalia missing. 125—126, *Y. jacksoni* species nova, allotype, Kata Mane River, Ethiopia; 125, sinus vaginalis flattened down; 126, right anal lobe.



from the eastern part of Africa resembles *Y. pupillaris* from that same area, while the W. African form resembles *Y. pupillaris* from that part of Africa.

The W. African race of *Y. pupillaris* can easily be distinguished from the E. African form of *Y. impura* on external characters, but the E. African races of the two species are difficult to separate with certainty, without exposing the genitalia, and the W. African races hardly at all; they resemble each other perfectly and I cannot point to any particular character which is distinct for each species.

I have before me 62 males of *Y. pupillaris pupillaris* and 220 males of *Y. impura impura* from Lamto, Ivory Coast, and it is not possible to determine individual specimens with certainty, without examining the genitalia. The two species are both very variable and at the same time very much alike. But when having the two large series beside each other, it is noticeable that on average, *Y. pupillaris* has more clearly defined markings on the upperside of the wings. All the 62 *Y. pupillaris*, representatives of the two seasons, have clear h.w. submarginal and discal bands. This is very variable in *Y. impura*, but in most specimens the markings are more obscured.

Fortunately, the two species can easily be separated on the genitalia by brushing aside some hairs of the tip of the abdomen and examining with a good hand lens. The wide uncus of *Y. pupillaris* and the narrow, sharply bent uncus and long, slender valva of *Y. impura* cannot be mistaken, and they are also quite distinct from all other species here dealt with. In *Y. impura* from Ivory Coast I have never seen very large h.w. underside ocellar spots as often occurs in *Y. pupillaris* from that part of Africa. The general appearance when large series are examined, is the paler underside of *Y. impura*. The difference between dry and wet season forms of *Y. impura impura* is more pronounced than in *Y. pupillaris pupillaris*.

Ypthima pupillaris Butler

For distinguishing characters of this species see above.

***Ypthima pupillaris pupillaris* Butler**
(figs. 9, 83—86, 116—118, 171, pl. 6 figs. 9—12)

Ypthima pupillaris Butler, 1888: 59 (River Dangu, Ganyese Tambu, Eq. Afr.)

Ypthima gazana van Son, 1955: 151, pl. 5, figs. 79, 80, gen. figs. 169, 170. Syn nov.

Ypthima pupillaris ab. *depupillata* Strand, 1909: 113 (Loma).

Ypthima pupillaris ab. *macrocellata* Strand, 1913: 150 (Cameroun).

Rhodesian specimens described as *Y. gazana* by van Son (1955: 151) correspond with *Y. pupillaris pupillaris* Butler from Ivory Coast. The pronounced markings above of specimens from W. Africa and Rhodesia are identical and much clearer than in E. African specimens; on an average they are also smaller. These characteristics are constant in all the specimens I have examined, in both seasonal forms from W. Africa and Rhodesia, and different from E. African aggregates.

Strand's *Y. pupillaris* ab. *depupillata* is described from a single worn female from Loma, with no other locality name; with large ocellar spots and no pupils in spots 2 and 6 of the h.w. underside (these, however, may have been rubbed off, if small). Whether the specimen belongs to *Y. pupillaris* or to *Y. impura* is a question which must remain unanswered, as the specimen most certainly was destroyed together with most of the other *Ypthima* types in Berlin, during the 1939—45 war. *Y. pupillaris* ab. *macrocellata* from Cameroun, could be *Y. pupillaris*, but also possibly *Y. impura*. This cannot be verified as the type is lost. Strand says "Das Exemplar zeichnet sich durch grosse Ocellen der Unterseite der Flügel aus".

External characters (pl. 6 figs. 9—12). — Antenna male 35, female 36 joints; shaft brown and

Figs. 127—135. Female genitalia of *Ypthima* species. 127—128, *Y. simplicia* Butler, Ethiopia; 127, prep. no. 1743, with sinus vaginalis detached and flattened down; 128, posterior plate, prep. no. 707A. 129—130, *Y. diplommata* Overlaet, Upper Longwe, Bungo, Angola; 129, genitalia with posterior plate removed; 130, posterior plate. 131—133, *Y. praestans* Overlaet, Katanga; 131, genitalia with anterior plate and bursa removed, posterior plate straightened; 132, lateral sclerites with anterior plate, ductus and bursa; 133, posterior plate in natural position. 134—135, *Y. yatta* species nova, Sheik Hussein, Upper Shebeli River, Ethiopia; 134, sinus vaginalis with genital plates; 135, right anal lobe.

white ringed above, white below, thicker white line in the female; club gradual, double grooved on the underside for full length of the joints, end joint as long as, or longer than penultimate; Van Son (1955) says that in South African specimens the end joint is much longer. Palpi: second joint more than twice the length of the terminal joint.

Wet season form. Male. Upperside, ground colour of the wings brown (rather faded specimens); f.w. inner side of the ocellar area rather obscured in most specimens by the ground colour invading the area up to the ocellar dark ring; outer dark brown border of ocellar area very pronounced; a paler submarginal border and two clearly defined marginal lines, the inner line thickest, like *Y. impura*; h.w. with rather prominent discal and submarginal bands, somewhat resembling *Y. doleta*; two marginal lines; one or two ocellar spots in 1b and one in 2; in some the spot in 1b is lacking, or extremely faint. Underside f.w. ground colour greyish, with dense olive-brown striation; ocellar area clearly defined by the dark brown border; in some specimens this dark border is merging with the brown eye-ring, with hardly any striation in between; in others, there is striated space in between them; the brown border is generally drawn out towards tornus, sometimes nearly reaching the hind margin of the wing; there are clearly defined brown bands on the h.w. submarginal and discal areas, a double marginal line, the inner thickest, almost black; a double ocellar spot in 1b, one in 2 and one in 6; the size of the eye spots is very variable. Length of f.w. 16.3 to 19.3 mm, average 17.7 mm antenna-wing ratio 0.43.

Female. Similar to the male, but the wings more rounded; underside as the male with large ocellar spots, those in 6 and 2 of the h.w. large and of equal size, the tornal spot much smaller. Length of f.w. 16 to 20.8 mm, average 18.5 to 19 mm, antenna-wing ratio 0.41.

Note. Apart from the Rhodesian specimens, the material examined comes from humid parts of W. Africa where typical d.s.f. are not likely to occur.

Male genitalia (figs. 83—86). — Prep. nos. 708, 727, 1239 from Ivory Coast; 1352, 1823 from Nigeria; 390 from Rhodesia. Dorsal aspect: Uncus very wide and dorso-ventrally flattened from base to apex, unlike all other *Ypthima* of the continental African group. Lateral aspect: Saccus rather large, robust; valva, basal two third very broad, squarish, with dorsal

margin almost parallel to ventral margin, abruptly bent ventrad to form the narrow distal part; the apical process placed dorsad, pointing up and at 90° to the longitudinal axis of valva; aedeagus as long as valva, the basal one quarter (phallobase) narrow and turned ventrad, the rest evenly tapering to a rather blunt, upturned tip.

Female genitalia (figs. 116—118, 171). — Prep. nos. 701, 709, 1269, 1270, 1272 from Ivory Coast; 888 from Rhodesia. Anterior wall of sinus vaginalis flattened down in the figure. The anterior plate very wavy, one large fold on each side of the raised frontal portion, which consists of two rounded lobes separated by a shallow emargination, protruding as a fold; the frontal portion of the posterior plate consisting of two rather pointed lobes, separated by a V-formed indentation, its lateral folds strongly bent back; the lateral sclerites wide nearly all the way, V-shaped; anterior wall of sinus vaginalis with a tongue-like frontal sclerotization; ductus long, bursa kidney-shaped.

Habitat. — Woodland and grassland.

Distribution (fig. 9). — Ivory Coast to Nigeria, W. Zaire and Rhodesia.

***Ypthima pupillaris obscurata* subsp. nova**
(figs. 9, 170, 172, pl. 6 figs. 13—18)

External characters (pl. 6 figs 13—18). — Male. Differs from the nominate race in the more evenly coloured fuscous brown upperside, with only very slight indications of h.w. bands; inner side of the f.w. ocellar area more obscured by the dark brown ground colour invading the area up to the dark ocellar ring. Underside, h.w. marginal lines less clearly defined; particularly in the d.s.f. the lines are almost obscured in the striation and hardly discernable. The specimens are larger than in ssp. *pupillaris*, even the d.s.f. is a little larger than the W. African race. Length of f.w., w.s.f. 20.8 mm, d.s.f. 18.7 mm, on the average. Antenna-wing ratio 0.40 (lower than in *Y. pupillaris pupillaris*).

Female. Slightly paler than the male; wings more rounded; very faint indication of h.w. discal band; underside as in the male, with very large eye-spots in the w.s.f., which are reduced to small black dots in the d.s.f., the f.w. apical eye-spot is also smaller in the d.s.f. The female differs little from the nominate race. Length of f.w. 19 to 20.5 mm.

Male genitalia. — Prep. nos. 20, 57, 122, 223, 228, 391, 721, 866, 542 from Tanzania. Same as *Y. pupillaris pupillaris*; the narrow distal portion of valva often a little shorter.

Female genitalia (figs. 170, 172). — Prep. nos. 722, 1016, 1017, 1125, 1397 from Tanzania. As the nominate race. The posterior plate varies a little, as shown in the figures. This variation seems to occur in both races.

Habitat. — Rare at lower altitudes with woodland, but locally common in montane grassland above 1500 m.

Distribution (fig. 9). — Eastern Africa.

Holotype ♂: Tanzania, Mpanda, Ngondo, 1500 m, 14.i.1970, J. Kielland. Allotype ♀: Tanzania, Kigoma, Lubalizi, 1200 m, 7.iii.1970, J. Kielland. Paratypes: Mpanda, Sitwe, 1700 m, 20.v.1970, 24.x.1958, 2 ♂; Mpanda, Kampisa, 1500 m, 24.xi.1968, 25.xi.1962, 2 ♂; Kigoma, Mweze, 1700 m, 11.vi.1968, 2 ♂; Mpanda, Ngondo, 1500 m, 14.i.1970, 2 ♂; J. Kielland; Mufindi, November 1958, R. H. Carcasson, 4 ♂; Njombe, xii 1968, C. MacCleary, 2 ♂; Kigoma, Mt. Kungwe, ix.1954, 1 ♂; Uganda, Ankole, Kalinzu, xi.1961, 1 ♀; Acholi, Madi Opei, iii.1952, T. H. E. Jackson, 1 ♀. Holotype and allotype in the NMN, paratypes in NMN, BM and J. Kielland collection.

Ypthima impura Elwes & Edwards

For distinguishing characters, see above.

Ypthima impura impura Elwes & Edwards
(figs. 9, 79—82, 119, 120, 156—159, pl. 7 figs. 1, 2)

Ypthima impura Elwes & Edwards, 1893: 23 (Angola).

Elwes & Edwards (1893) said about this species and *Y. doleta* that they are very close in external characters, particularly the underside. Although the W. African aggregates may resemble *Y. doleta* to a certain extent, in my opinion the external characters are closer to *Y. pupillar* and as stated before, almost identical. But the genitalia of all these species are very unlike each other in both sexes.

External characters (pl. 7 figs. 1—2). — Antenna male 37 joints, female 36 tot 37 joints; end joint > = < penultimate; shaft black and white ringed above, speckled with white below; palpi black and white hairy; second joint twice the length of the last joint.

Wet season form. Male. Upperside, ground colour dark greyish brown; f.w. ocellar area a little paler than the ground colour, usually clearly indicated by a dark brown border; there is a double, prominent, brown marginal line; the h.w. with a thick and sharply defined, dark

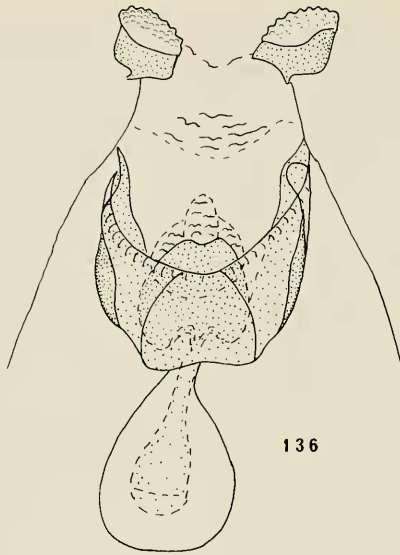
brown discal band; a prominent submarginal line; a double marginal line and a brown cilia with a darker brown median line; there is an ocellar spot in 2 and in some specimens there is also one spot in 1b. Underside, f.w. with clearly defined ocellar area; a brown, double marginal line. In all specimens from Ivory Coast, Central Congo and Ghana, the size of the h.w. eye-spots tend to correspond with those of the intermediate w.s.f. of *Y. impura paupera*; none are very big, as often happens in the extreme w.s.f. of ssp. *paupera*; also the uneven striation and prominent bands correspond.

Female. A little paler and larger than the male, with broader wings.

Dry season form. The only difference from the w.s.f. is the ocellar spots, which are reduced to tiny points, often hardly discernable. None of the specimens has the pale underside of the d.s.f. of ssp. *paupera*. Length of f.w., w.s.f. ♂ 16 to 18.5 mm ♀ 17.5 to 19.5 mm, d.s.f. ♂ 16.5 to 19 mm, ♀ 18 to 20.5 mm, antenna-wing ratio ♂ 0.43, ♀ 0.41.

Male genitalia (figs. 79—82). — Prep. nos. 403 from Angola; 704, 706, 710, 711, 726, 1236, 1237, 1242—46, 1255, 1259, 1264, 1268 from Ivory Coast; 1226 from Ghana; 1355 from Nigeria. Dorsal aspect: Tegumen and base of uncus wide, then abruptly tapering to a long and narrow distal portion; distal end of valva truncate, with a wide accessory plate, extending along the inner edge (this is normal, but in a few specimens the plate is situated distad and in many specimens the plate is interrupted.) Lateral aspect: Tegumen normal, but uncus directed upwards with the distal end strongly curved ventrad; valva long and comparatively narrow over the whole length, gradually tapering; aedeagus longer than tegumen-uncus, but shorter than valva.

Female genitalia (figs. 119—120, 156—159). — Prep. nos. 700, 723 1249—51, 1256—58, 1260, 1271—73, 1275, 1279—82, 1284 from Ivory Coast; 402 from Zaire. Sinus vaginalis large and deep; the anterior wall with a frontal sclerotization; anterior plate variable, normally with three distal lobes, the middle largest, rounded, some specimens with, others without an emargination in the middle; the posterior plate is also variable, but is always very long and narrow, with a rounded apex in specimens examined from East and West Africa, but according to van Son (1955), with a spear-shaped distal end in specimens from South Africa; the lateral sclerites V-shaped; ductus rather short; bursa



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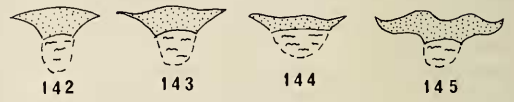
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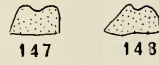


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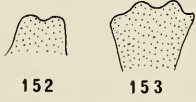
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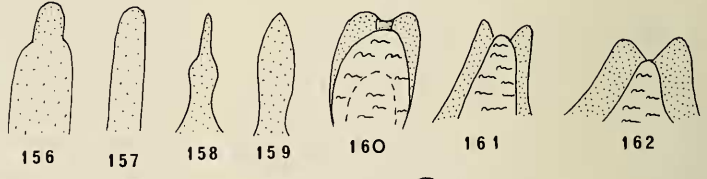
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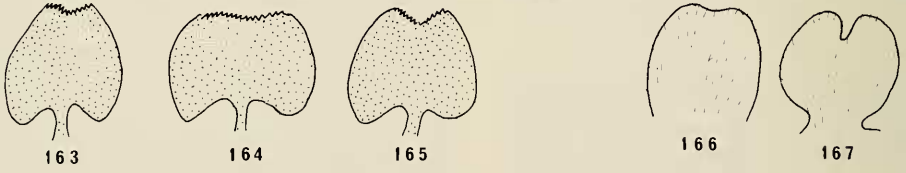
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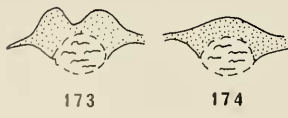
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ovoid, with entrance of ductus centrally placed. Van Son states that the bursa is "pyriform" (also shown in his figure 172). None of the many specimens I have examined from other parts of Africa correspond with this statement; they were all ovoid.

Distribution (fig. 9). — Ivory Coast to Nigeria and scattered records from Cameroun, Central Congo and Angola.

Ypthima impura paupera Ungemach, comb
nov.

(fig. 9, pl. 7 figs. 3—8)

Ypthima pupillaris paupera Ungemach, 1932: 51
(Ethiopia).

Ypthima pupillaris paupera f. *hiemis* Ungemach,
1932: 51 (Ethiopia).

Ypthima impura f. *badhami* Van Son, 1955: 150, pls.
56, figs. 77, 78 (Rhodesia), d.s.f.

Ungemach (1932) described *paupera* as a subspecies of *Y. pupillaris* with the form *hiemis* from Ethiopia. Photos and genitalia drawings sent to me by Dr. Condamin clearly show that this is the E. African race of *Y. impura*, represented by wet and dry season forms; *paupera* being the w.s.f. and *hiemis* the d.s.f. Specimens of *Y. impura paupera* from Ethiopia are darker than specimens from E. Africa.

Ssp. *paupera* is a very variable race and a description of just one form is very inadequate for an identification. The underside h.w. eye-spots vary from tiny black dots in the extreme d.s.f. to very large spots in the extreme w.s.f.; the underside coloration and markings are also extremely variable. The extreme d.s.f. has a very pale underside, with rather thin and widely spaced striation, but prominent discal and median lines; this probably had led to the confusion with certain forms of *Y. asterope*. The intermediate form has slightly bigger eye-spots; the submarginal and discal bands of the h.w. are

broader, the striation closer, giving it a darker appearance; there is a w.s.f. with large eye-spots, but otherwise with very little markings except for the even, olive-brown striation, rather similar to and easily misidentified with certain forms of *Y. pupillaris*; individual specimens, two females from Endebes, Kenya, have the underside very heavily striated, with pronounced h.w. submarginal and discal bands, with olive-brown blotches. Also the wing length varies greatly, as well as the length of the last antennal joint.

Van Son (1955) writes about *Y. impura* that the w.s.f. is generally bigger than the d.s.f. In Tanzania the form of the dry season appears to be the largest. Further he states that the antennal end joint equals the penultimate in length. By examining numerous specimens, both from East and West Africa, I have found that the last joint $> = <$ penultimate.

Due to the very great variability of this species, it is difficult to make a proper description of it and only the characters of the genitalia can with certainty separate it from other species.

External characters (pl. 7 figs. 3—8). — Antenna 34 to 37 joints, shaft black and white ringed above, speckled with white below; club gradual; palpi white and black hairy, second joint twice the length of the last joint.

Wet season form. Male. Upperside ground colour dark greyish brown; f.w. ocellar area indistinct due to the ground colour invading it. However, it is rather more clearly indicated than in *Y. pupillaris obscurata*. The submargin is slightly paler than the ground colour, separated from the ocellar area by a dark brown line; in some specimens the outer section of the ocellar area is a little paler than the inner part, but in others, there is hardly any difference; h.w. discal band is hardly discernible in some specimens; submarginal and marginal lines and cilia as in *Y. impura*; there is an ocellar spot in 2, in

Figs. 136—178. Female genitalia of *Ypthima* species. 136, *Y. lamto* species nova, Lamto, Ivory Coast. 137—138, variations in genital plates; 137—141, anterior plates of *Y. asterope* Klug; 137—139, normal shapes, Eastern Africa to Somalia; 140, atypic, Kiambiti Hill, Kenya; 141, atypic, Tiaroye, Senegal. 142—145, posterior plates of *Y. asterope* Klug; 142, corresponding to 137; 143 to 138; 144 to 134; 145 to 141. 146, *Y. congoana* Overlaet, anterior plate. 147—151, *Y. rhodesiana* Carcasson; 147—148, anterior plates; 149—151, posterior plates. 152—155, *Y. antennata* van Son; 152—153, anterior plates; 154—155, posterior plates (152 and 154, Serengeti, Tanzania; 153 and 155, White Nile, Uganda). 156—159, *Y. impura* Elwes & Edwards, posterior plates; 156—157, common forms from East and West Africa; 158, South Africa; 159, uncommon form. 160—162, *Y. granulosa* Butler, posterior plates. 163—165, *Y. lamto* species nova, anterior plates. 166—167, *Y. condamini* species nova, anterior plates, always covered with spiny hairs. 168—169, *Y. doleta* Kirby, anterior plates. 170—172, *Y. pupillaris* Butler, posterior plates; 170, 172, ssp. *obscurata* subspecies nova, Tanzania; 171, ssp. *pupillaris* Butler, Ivory Coast. 173—178, *Y. simplicia*; 173—175, posterior plates; 176, anterior plate of 173; 177, 178, strongly aberrant form of anterior plate corresponding to 175 (177, frontal aspect; 178, flattened down).

some specimens there is also one spot in 1b. Underside extremely similar to that of *Y. pupillaris obscurata* with olive-brown striation; h.w. with a large spot in 2, one in 6 and a smaller, double pupilled one in 1b.

Female. The ocellar spot in the f.w. more rounded; the yellow ring paler; wings more rounded; underside ocellar spots a little larger; otherwise similar to the male.

Early wet season form (intermediate form). Both sexes differ from the extreme w.s.f. in paler and better defined ocellar areas, a more prominent underside h.w. discal band, generally thicker submarginal bands and a paler ground colour; the striation is seldom olive tinged and the specimens are generally easier to separate from *Y. pupillaris*. This form is typical for west Tanzania and occurs mostly during the first part of the rainy season.

Dry season form. Upperside dark greyish brown, the f.w. ocellar area clearly defined, more or less similar to the intermediate form; the underside is much paler than in the other forms, due to the much more widely spaced, blackish striation; the h.w. discal line clearly defined, the submarginal and marginal lines hardly discernible, particularly in the h.w. Females with both wings much more rounded than in the male, but otherwise similar.

The pale form reminds one of the underside of the d.s.f. *Y. praestans*. Length of f.w. Intermediate f. ♂ 16.5—19.5 mm, ♀ 18—20.5 mm. W.s.f. ♂ 16.5—20 mm, ♀ 18—21.5 mm. D.s.f. ♂ 17.5—20.5 mm, ♀ 20—21.5 mm. Antenna-wing ratio ♂ 0.41, ♀ 0.39 (lower than in the nominate form).

Male and female genitalia: As in *Y. impura impura*.

Habitat. — Deciduous woodland, particularly *Brachystegia* woodlands, and open habitats.

Distribution (fig. 9). — Ethiopia and East Africa to Zambia, Rhodesia, Transvaal and Natal and southern and probably eastern part of Zaire.

Ypthima pulchra Overlaet

(figs. 11, 91—93, 114, 115, pl. 8 figs. 7, 8, 10, 11)

Ypthima pulchra Overlaet, 1954: 41, fig. 1a—b (Kanganga, Zaire).

A paratype male and a female were kindly sent on loan to the author by Mr. Berger, TMB. The description is as follows.

External characters (pl. 8 figs. 7—8, 10—11). — Antenna 34 joints, shaft black and white ringed, club short, broader than in *Y. praestans* and *Y. doleta*, terminal joint longer than penultimate; palpi second joint very straight, two and a half times the length of the last joint.

Male. Upperside ground colour dark brown; f.w. with prominent, striated ocellar area; submarginal area as the ocellar area, divided by a thick, dark brown submarginal line; inner border of ocellar area close to eye-spot sharply defined, as in *Y. diplommata* and *Y. doleta*; a thick brown margin; cilia white at base, then brown with slightly paler tips; h.w. heavily marked, as in *Y. doleta*, by very irregular discal and submarginal bands; the submarginal band widened and incurved in space 4 and 5; a larger eye-spot in 2 and a smaller one in 6; marginal line as in the f.w.; cilia a little paler. Underside f.w. with a dark, curved median line, the basal area inside this line paler and striated; the median section up to the ocellar area darker brown; apex and subapex pale and striated; a marginal line, thinner than the upperside one; h.w. with prominent median, discal and submarginal bands; the submarginal bands making a wide bend into the discal area, between vein 3 to middle of space 5, its angle at vein 4; two ocellar spots in 1b, one in 2 and one in 6; the h.w. is paler than the dark area of the f.w.; the marginal line as in the f.w. Length of f.w. 18.4 mm, antenna-wing ratio 0.42.

Female. Upperside ground colour as in the male; the ocellar and submarginal areas paler; there is also some striation basad from the ocellar dark border; marginal line and cilia as in the male; h.w. as in the male, the light area a little paler; there is also an ocellar spot at tornus and a tiny black dot near it. Underside f.w. ground colour whitish grey, with very uneven striation, thickest in the subternal area; apex olive, with no dark line between this and the ocellar area; h.w. ground colour whitish grey, with very scattered, small brown specks, becoming a little closer towards the basal area; a median and a discal band; the area between these, greenish yellow or olive; a submarginal line with a large olive blotch; eye-spots as in the male. Length of f.w. 20 mm, antenna-wing ratio 0.40.

Both male and female are d.s.f.

Male genitalia (figs. 91—93). — No. NMN 92. Dissected by Mr. P. N. Muteshy. Dorsal aspect: Tegumen very wide and short; uncus wide basally and narrowing down to a thin distal portion; valva long and rather narrow and

sinuate, distal end with accessory plate bent interiad; aedeagus sinuate. Lateral aspect: Length of tegumen-uncus only two third of valva which is long and rather narrow, ventrad only slightly elbowed before midway; outer narrow portion very slender; aedeagus as long as tegumen-uncus, but much shorter than valva, distal end curved upwards.

Female genitalia (figs. 114—115). — No. MNM 93. Dissected by Mr. P. N. Muteshy. Sinus vaginalis wide, but rather shallow; margin of anterior wall slightly wavy, with a rounded frontal sclerotization, reaching the margin; anterior plate rather long, evenly rounded distally; posterior plate also long, but a little wider and distal part curved ventrad; the apex evenly rounded; lateral sclerites U-shaped and rather close together. The rest of the abdomen was damaged and the bursa was lacking.

Habitat. — Not known to author, but probably deciduous formations.

Distribution (fig. 11). — Known from central and western Katanga in Zaire.

Ypthima praestans Overlaet

(figs. 10, 88, 131—133, pl. 7 figs. 9—12, pl. 8 fig. 12)

Ypthima praestans Overlaet, 1954: 43, fig. 2 (Sankuru).

The holotype male was sent to me on loan from the TMB by Mr. Berger. Other specimens were examined at the BM.

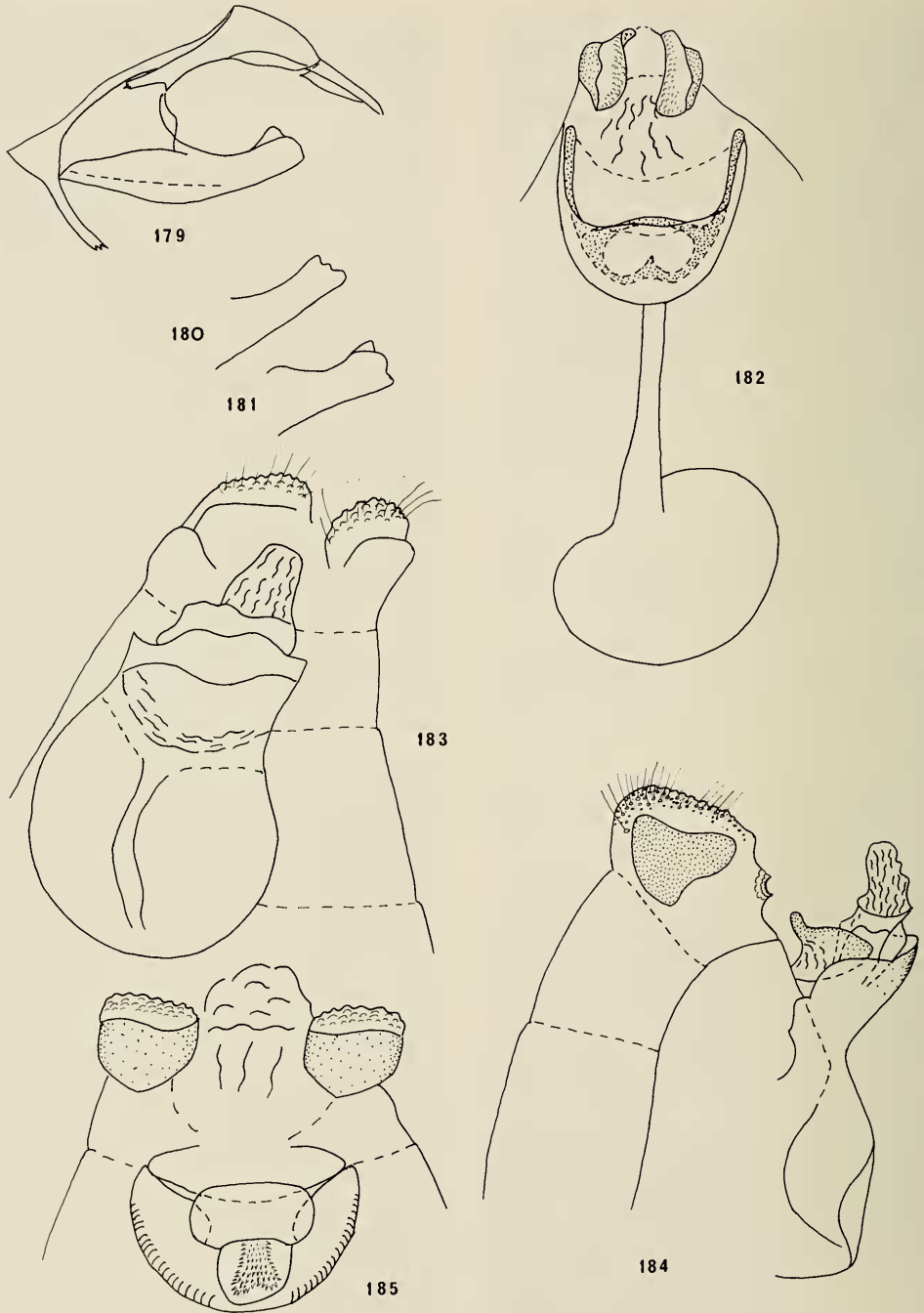
External characters (pl. 7 figs. 9—12, pl. 8 figs. 9, 12). — Antenna male 33 joints, female 37 joints, shaft black and white ringed, club thin, gradual, upperside outer half yellow, the inner half black, 12 joints, underside of each joint double grooved over one quarter of its length, last joint longer than penultimate; palpi second joint two and a half times the length of the last joint.

Male. Upperside, wings dark sooty brown; f.w. ocellar area pale, striated, extended towards tornus to vein 1b, surrounded by a dark band almost reaching the hind margin near tornus and almost touching the rather wide, but unclear marginal line; h.w. with slightly paler discal area and with the discal and submarginal bands obscured; five ocellar spots, a double spot in 1b, one larger in 2, small ones in 4 and 5 and a bigger one in 6. Underside, wings almost as in some forms of *Y. impura paupera*; but there are also spots in spaces 4 and 5 as on the upperside; a median line in both fore and hind wings; h.w.

with a discal and a submarginal band, which is broken at vein 4 and hardly discernible between vein 4 and tornus; the marginal line is very indistinct. Length of f.w. 19 mm, antenna-wing ratio 0.39.

Female (d.s.f.). Upperside, ground colour brown to pale brown in some specimens; f.w. ocellar area large, striated, paler than the ground colour and extended nearly to the hind margin at vein 1b, indicated by a brown line; there is a double marginal line; the area between the marginal line and the ocellar border of the same shade and striation as the ocellar area; h.w. with more or less clearly marked discal line; a submarginal line parallel to the margin over the whole length; a double marginal line, the inner thickest; there is an ocellar spot in 2 and a double spot in 1b. The spot in 1b is in some specimens very indistinct; in some specimens there is also a faint dot in 6; the narrow strip between the two marginal lines and the submarginal line is paler than the ground colour; the discal area is, in some specimens, paler than the ground colour, in others hardly paler. The specimens look very similar to the female of *Y. impura* on the upperside, the underside like the d.s.f. of both *Y. impura* and *Y. pupillaris*, except that the discal line is straighter. Underside with paler or, in other specimens, darker brown striation; f.w. ocellar area clearly indicated by a brown line, prolonged to vein 1b, somewhat irregular on the underside in area 1 and 2; there is a double marginal line, the outer one very thin; cilia whitish with a brown, median line; h.w. with a double black spot in 1b, another dot in 2 and one in 6, no clear indication of a pupil; there is a clearly visible discal line, straighter than normal in *Ypthima*; a subbasal line, parallel to the discal one, which is indistinct in some specimens; a submarginal line and a double marginal line, the inner of these is, in some specimens, indistinct; cilia as in the f.w. Length of f.w. 19 to 21.6 mm, antenna-wing ratio 0.38.

Male genitalia (fig. 88). — Prep. nos. 753A, 756A, 759A. Dorsal aspect: Tegumen-uncus slender; tegumen a little shorter than uncus; valva sinuate, widely bent and slender, accessory plates placed at the apex pointing almost straight ahead; futura thin, widely U-shaped; saccus large. Lateral aspect: Tegumen nearly rectangularly shaped; its lateral processes long and narrow and turned antieriad; valva long and slender, narrow portion very slender and distal part bent ventrad; dorsal process large; aedeagus longer than tegumen-uncus, but much



Figs. 179—181. *Ypthimomorpha itonia* (Hewitson), male genitalia; 179, lateral aspect; 180—181, variations of distal part of valva. 182, *Ypthimomorpha itonia* (Hewitson), female genitalia. Figs. 183—184. *Mashuna upemba* (Overlaet), female genitalia; 183, ventral aspect; 184, lateral aspect. Fig. 185. *Mashuna mashuna* Trimen, female genitalia.

shorter than valva, distal half narrow, basal part broad.

Female genitalia (figs. 131—133). — Prep. nos. 757A, 1828K, 1829K, 2038, 2039, 2041. Sinus vaginalis deep; anterior and posterior plates large and rather complex, not unlike those of *Y. pupillar*; lateral sclerites very wide in front, at the base produced, forming a wide lobe which looks like an extra fold of the anterior plate; the anterior plate is bilobed and turned in at the edges; the posterior plate which looks rather complexly folded with two lateral lobes, completely changes its shape when straightened, as shown in the figures; ductus narrow, bursa small, almost circle-shaped.

Habitat. — Not known to author, but probably deciduous tree formations.

Distribution (fig. 10). — Recorded from Katarina in Zaire, Angola and West Zambia.

Ypthima doleta Kirby

(figs. 10, 89, 90, 112, 113, 168, 169, pl. 7 figs. 13—16)

Ypthima doleta Kirby, 1880: 335 (Sierra Leone).

Ypthima doleta ab. *tripunctata* Strand, 1909: 114 (Cameroun).

Ypthima doleta ab. *quadripunctata* Strand, 1909: 114 (Cameroun).

Ypthima doleta ab. *quinquepunctata* Strand, 1909: 114 (Cameroun).

Ypthima doleta ab. *septemocellata* Strand, 1909: 114 (Cameroun).

Ypthima doleta ab. *strigata* Strand, 1913: 150.

Ypthima doleta ab. *defecta* Strand, 1913: 150 (Uelleburg).

Ypthima doleta ab. *asteropina* Strand, 1913: 150 (Alen) (perhaps another species)

Ypthima doleta ab. *dschangensis* Strand, 1914: 153 (Cameroun).

As usual, Strand's original descriptions of the aberrations refer to variations of the ocellar spots only.

External characters (pl. 7 figs. 13—16). — Antenna male 34 joints, female 33 joints; shaft dark brown, white ringed above, a longitudinal, white stripe below; club thin, brown above, last joint as long as penultimate in most specimens, longer in others, as in some specimens from Uganda (NMN) and from Cameroun (IFAN); underside of the club with two small, circular grooves anterior of each joint; palpi second joint only slightly curved, two and a half times as long as the last joint.

Male. Rather similar to some forms of *Y. praestans* and *Y. pulchra*. Upperside wings

brown; f.w. ocellar area large, with a dark brown border, almost reaching the hind margin; ocellar and median areas, costa and submargin, except apex, striated; margin brown bordered; cilia brown with paler tips; h.w. with dark brown discal and submarginal bands; the discal line sharply excurved at vein 5, the submarginal line incurved at vein 4 and in most specimens more or less thickened between vein 3 and 6; the discal and submarginal lines converge and join each other close to the spot in space 1b, near tornus, enclosing a paler, striated postdiscal area; there is a double ocellus in 1b, one in 2, one in 3 and a poorly developed one in 6; the one in 2 is the largest and placed closer to the base of the wing than the ocellus in space 3 and is in line with the second spot in 1b and the spot in 6. Underside somewhat resembling *Y. impura impura* from West Africa, but generally paler and often more evenly striated; there is a median line; the brown discal and submarginal lines coinciding with those of the upperside, are, in some specimens, broken up by the whitish ground colour; ocellar spots as on upperside, but the one in 6 is normally developed and of the same size as the spot in 2. Length of f.w. 18.5 to 20 mm, antenna-wing ratio 0.42.

Female. Similar to the male, but the wings much more rounded and rather paler; upperside f.w. subapical eye-spot larger, the ocellar brown border variable in thickness; striation of the f.w. more extended basad than in the male, but the extent of the striation varies. Underside as in the male. Length of f.w. 19 to 22 mm, antenna-wing ratio 0.39—0.40.

Male genitalia (figs. 89—90). — Prep. nos. 720, 1238 from Ivory Coast; 1221—25, 1349, 2005 from Ghana; 389, 2287 from Zaire; 877, 884, 885 from Uganda; 1724, 1725 from Cameroun; 2002 from Angola. Dorsal aspect: Tegumen wide at base; uncus gradually tapering to a narrow distal portion; valva strongly and evenly curved from base to near apex; here the distal portion is thickened and the apex is turned outward; accessory plates placed at a sharp angle. Lateral aspect: Tegumen nearly straight dorsad, basal part straight, rectangular; vinculum rather short and strongly curved; uncus as long as tegumen, in the dorsal middle rather hunched; valva robust, narrow portion short and strongly thickened distad; aedeagus shorter than valva, rather robust and evenly curved.

Female genitalia (figs. 112—113, 168—169). — Prep. nos. 718, 719, 1274 from Ivory Coast; 888, 1010 from Uganda; 1432 from Bukoba,

Tanzania. Sinus vaginalis large and deep, margin even, anterior sclerotization narrow, reaching the margin, distal part serrated; anterior plate variable, but always bilobed distally and with an anterior, smaller part, in some specimens bilobed and in others single, more or less weakly sclerotized; posterior plate unsclerotized with a tongue-like distal part; ductus wide; bursa rather small, slightly oblong.

Variation in Ghana and Ivory Coast. — All specimens examined from Ghana and Ivory Coast differ from aggregates from other parts of Africa as follows. Male. F.w. subapical ocellar area darker due to close striation; the area itself smaller and its brown border wider and more pronounced; the ocellar spot larger and the yellow ring brighter; h.w. median and submarginal bands also more pronounced. Underside, f.w. ocellar spot larger and brighter; the ocellar area more heavily bordered in brown; h.w. markings better developed.

In the female the f.w. ocellar spot generally larger and on upper and underside ocellar area much smaller than in aggregates from other parts of Africa.

Specimens from the type locality of Sierra Leone are similar to those from central and eastern Africa and I do not consider it advisable to name the Ghana-Ivory Coast form as a distinct race.

Habitat. — Flying in rather humid habitats of farmland, forest margins and glades.

Distribution (fig. 10). — From Sierra Leone through Ivory Coast and Ghana, Togo, Nigeria to Zaire and Angola and from there to Uganda and N.W. Tanzania. There are also a few records from S. Sudan.

Ypthima diplommata Overlaet

(figs. 10, 87, 129, 130, pl. 7 figs. 17, 18, pl. 8 figs. 13, 14)

Ypthima diplommata Overlaet, 1954: 44, fig. 3 (Kafakumba, Katanga).

The holotype (male, d.s.f.) was sent to the author on loan by Mr. Berger and a brief description follows.

External characters (pl. 7 figs. 17—18 pl. 8 figs. 13, 14). — Underside, wings ground colour and markings as in *Y. pulchra* with perhaps a paler tornal area of the f.w.; a large spot in 2, one in 3 and a black spot in 6. Underside f.w. differs in the paler subtornal area with a well defined ocellar brown border; the yellow ocellar ring brighter; h.w. ground colour whitish with

scattered brown striation, heavily marked brown in the median area from costa to about middle of the cell between the median and discal line; a marginal brown blotch from apex to vein 4; there are two small ocellar spots in 1b, one in 2 and one in 6. Length of f.w. 18 mm.

A w.s.f. male from Zambia, sent by Dr. Pinhey, had the following characters. Antenna 34 joints, end joint longer than penultimate; there are small oval, double grooves on the underside of each joint of the club; second palpal joint twice the length of the end joint. Upperside h.w. ocellar spots in space 2 and 3. Underside wings darker than the d.s.f., similar to *Y. doleta* with striation on h.w. uneven; there is a double pupilled spot in 1b, a larger one in 2, a smaller in 3 and a large spot in 6.

Two females which must belong to this species were found in the BM collection among specimens of *Y. doleta* and *Y. praestans*. The female has remained undescribed and is here described for the first time. Upperside almost as in *Y. doleta*, but with only one ocellar spot in the h.w. in area 2. Antenna 29 joints; palpi second joint less than twice the length of the third joint. Underside somewhat similar to a large female *Y. granulosa*; on the h.w. there are the usual ocellar spots as in *Y. doleta*, a double one in 1b, one in 2, one in 5 and in 6. Length of f.w. 18 to 18.2 mm, antenna-wing ratio 0.39.

Male genitalia (fig. 87). — Prep. Overlaet and prep. nos 761A, 2407 from Zambia. Dorsal aspect: Tegumen-uncus rather long and slender; uncus tapering to a narrow, distal portion; valva narrow distal portion bent interiad; accessory plate robust and furnished with 5 to 7 strong teeth. Lateral aspect: Tegumen nearly rectangular-shaped as in *Y. praestans* and *Y. doleta*, but appendices angulares much broader; lower half of vinculum wide; valva, narrow portion much shorter, about one third of wide portion; aedeagus as long as, or shorter than valva.

Female genitalia (figs. 129—130). — Prep. nos. 754A no data label; 2040 from Angola. Sinus vaginalis wide and deep, squarely shaped; lateral sclerites broad; anterior plate large, simple, bilobed distally with rather wavy edge; posterior plate peculiar, roundly fan-shaped with longitudinal ridges, unsclerotized; anal lobes with short, blunt apophyses; ductus very short; bursa small, nearly circular.

Habitat. — Probably similar to that of *Y. praestans*.

Distribution (fig. 10). — Katanga, W. Zambia and Angola.

***Ypthima albida* Butler**

This species is distinguished from all other known *Ypthima* by the silvery white ground colour of the upperside of both wing pairs.

***Ypthima albida albida* Butler**

(figs. 11, 94—96, 111)

Ypthima albida Butler, 1888: 59 (Fóda, Equatorial Africa).

Ypthima albida argentata Bartel, 1905: 134 (Niarungungu, Ruanda). Syn. nov.

Ypthima albida ab. *conradsii* Strand, 1909: 113 (Ukerewe Isl., L. Victoria).

The race *argentata* Bartel described from Ruanda, is a typical East African form, similar to specimens examined from Uganda and Kenya and specimens from Kibondo and Bukoba, N.W. Tanzania. A specimen of *Y. albida argentata* from the type locality in Ruanda, was kindly sent to me on loan by Dr. Hannemann of the BMG. Photos of the type of *Y. albida*, of specimens from the type locality of *argentata* and also of *Y. albida uniformis* Bartel, were sent to writer from the BM. It is difficult to determine from the photos alone and Butler's type of *Y. albida* is rather worn, but I do not think there is much difference between ssp. *albida* and specimens from Ruanda, or other parts of East Africa. There is individual variation with regard to the width of the marginal dark bands, and size and number of the h.w. ocellar spots, which is normal amongst *Ypthima*.

The f.w. subapical ocellar spot in the *albida* type, looks rather obscured, as Butler himself stated, but this, I think, is due to fading and rubbing. Aurivillius (1914) says that *argentata* only differs from *Y. albida albida* in the upperside h.w. having two eye-spots instead of only one in *Y. albida albida*, but as stated before, the number of eye-spots is very variable in *Ypthima*. From this we can conclude that *Y. albida argentata* Bartel is a synonym of *Y. albida albida* Butler.

External characters. — Antenna male and female 35 joints, brown and white ringed dorsally, white sprinkled ventrally; club thin and very gradual, end joint a little longer than penultimate, distal half of each joint double grooved; palpi second joint two and a half times as long as the third joint.

Male. Upperside, wings silvery, or whitish; f.w. with a normal subapical eye spot, with the ocellar area bordered only on the outside by a brown submarginal band, which in some speci-

mens fades out near tornus, in others at vein 2; from the eye spot to the base of the wings the ground colour is not interrupted; there is a brown margin which is more or less fused into the submarginal band; there is also more or less brown dusting, or striation between the submargin and the eye-spot; costa dusted with brown; h.w. with margin striated with brown; in some specimens the striation includes and obscures the ocellar spots and a submarginal line which is situated rather close to the margin; in others the brown submarginal line is clearly defined and with very little dusting between this and the margin, which is finely bordered with brown; cilia brown with slightly paler tips; there is always a prominent ocellar spot in 2, mostly also one in 1b, which is more or less obscured in the dark border; there is often a third, small spot in 3 and sometimes a plain, dark spot in 6. Underside dark brown, in some specimens almost blackish brown, with fine whitish striation; f.w. with distinct ocellar area, bordered on the inner side by a median band; h.w. with very irregular, olive tinted median and submarginal bands; the submarginal band is strongly widened in 4 and 5 to a blotch, reaching the margin; a double pupilled spot in 1b, one in 2 and one in 6. On the underside the spots are nearly equal in size and there is no spot in 3, even in specimens with a spot in that area on the upperside. Length of f.w. 19 to 20 mm, antenna-wing ratio 0.39.

Female. Upperside, wings striated with brown, particularly the f.w.; f.w. with a more or less clearly defined, dark inner border to the ocellar area; the distal quarter of the h.w. generally more heavily striated than the rest of the wing, but in some specimens the whole surface is rather evenly striated. Underside as that of the male, but the olive blotches and bands more pronounced. Length of f.w. 20 to 22 mm, antenna-wing ratio 0.38.

Male genitalia (figs. 94—96). — Prep. no. 456 from Kibondo, Tanzania; 889 from Fort Portal, Uganda; 890 from Kaimosi, Kenya; 941 from Kalinzu, Uganda; 942, 944 from Bugoma and Katera, Uganda. Dorsal aspect: Tegumen and uncus short and wide; distal narrow portion of uncus very short; valva strongly, but evenly curved interiad, its accessory plate with 4 or 5 teeth. Lateral aspect: Uncus tapering to a sharp point; vinculum straight; saccus robust, wide; valva rather robust and strongly hunched dorsad; the narrow portion with a ventral concavity near its juncture with the wide portion; ae-

deagus basal, open part narrow, the rest wide and rather straight.

Female genitalia (fig. 111). — Prep. nos. 892, 1009 from Katera Sango Bay, Uganda. Anal lobes triangular as in *Y. asterope*; sinus vaginalis moderate, rather shallow; anterior plate unsclerotized, squarish, with uneven edges, distal end with two shallow emarginations; posterior plate unsclerotized, short and wide, with an anterior, central lobe, which is rounded distad; ductus wide, moderately long; bursa small, obliquely oblong.

Habitat. — Forest margins and swampy riversides.

Distribution (fig. 11). — Uganda to W. Kenya and N.W. Tanzania, Burundi and eastern part of Zaïre.

Ypthima albida uniformis Bartel (figs. 11, 97—99)

Ypthima albida uniformis Bartel, 1905: 134 (Central Africa).

Ypthima albida uniformis ab. *pseudalbida* Dufrane, 1945: 94 (Kamitunga).

Ypthima albida uniformis ab. *impunctata* Dufrane, 1945: 94 (Kamitunga).

External characters. — In Bartel's description of this race, he stated that there are no upperside markings except for some dark dusting at the basal part of costa and at apex of the f.w. This corresponds with the photos before me of specimens from Kivu in Zaïre, but the two f.w. subapical pupils are present and in one specimen, also a faint yellow ring around each pupil; the h.w. has only one ocellar spot in 2. The underside resembles that of the nominate race, but with more obscured h.w. median band and f.w. ocellar area. Length of f.w. (Bartel) 20 mm.

Female. Upperside, white ground colour less dusted with brown than in other races; the f.w. subapical ocellar spot well developed, but the yellow and outer brown rings unclear; there is a spot in 2 and a smaller one in 3 of the h.w. Underside as in the male, but white striation better developed and the f.w. subapical ocellar spot larger.

Male genitalia (figs. 97—99). — Prep. no 14.50. As nominate race.

Female genitalia. — Prep. no. 1449. As nominate race.

Distribution. — See fig. 11.

Ypthima albida occidentalis Bartel (fig. 11)

Ypthima albida occidentalis Bartel, 1905: 134 (North Cameroun).

Ypthima albida ab. *argentoides* Strand, 1914: 152 (Dschang, Cameroun).

I have not seen the type of this race, but three males which apparently belong here, were kindly sent to me on loan, by Mr. M. A. Cornes, NSPR Institute, Lagos, Nigeria. The specimens had been taken by R.G.T. Leger, at Obudu Plateau, Northern Nigeria, January 1972. The description of these is as follows.

External characters. — Male. Antenna as in ssp. *albida*, but the dorsal side finely sprinkled with white; palpi as in the nominate race. Upperside wings, ground colour slightly darker than in ssp. *albida*; the brown dusting of the margins darker, but this may be due to the comparatively recent capture of the Nigerian specimens, so they have had no time to fade yet. The f.w. submarginal band reaches tornus and there is very little white dusting between this and the margin; the h.w. eye spot in 3 is larger than in the other races. Length of f.w. 18.5 mm, antenna-wing ratio 0.39.

Female. Not known to me, but described by Bartel (1905) as follows: "... unterscheidet sich von ♂ dadurch, dass die Grundfarbe weisslich, sehr stark durch dunkle Atome verdüstert ist. Die gelbe Umrandung des Augenfleckes ist breiter als beim ♂."

Male genitalia as in *Y. albida albida*.

Note. — Strand's ab. *argentoides* may belong to this race, as the locality suggests. As the type is lost, nothing can be proved, but Strand's statement that the underside is more sprinkled with white than in ab. *conradsi* and *argentata* (which are forms of *Y. albida albida*), suggests that *argentoides* belongs to ssp. *occidentalis*. The equal size of the h.w. upperside ocellar spots is also an indication.

Distribution (fig. 11). — Cameroun to the northern part of Nigeria.

TWO GENERA SEPARATED FROM *YPHITHIMA* BY VAN SON

Ypthimomorpha Van Son, 1955

Type species: *Ypthima itonia* Hewitson, 1865

Ypthimomorpha itonia (Hewitson)
(figs. 179—182)

- Ypthima itonia* Hewitson, 1865: 287.
Ypthima itonia ab. *boeneli* Holland, 1896: 744 (East Africa).
Ypthima itonia ab. *quadriocellata* Strand, 1909: 113 (Tanzania, Majita).
Ypthima itonia ab. *microocellata* Strand, 1909: 113 (Tanzania, Ukerewe).
Ypthima itonia ab. *pluripupillata* Strand, 1909: 114 (Central Africa (Zaire)).
Ypthima itonia ab. *subocellata* Strand, 1909: 114 (Songea, Ungoni in Tanzania).
Ypthima itonia ab. *plurioocellata* Strand, 1913: 150 (Cameroun, Assoko Jaundestation-Simekoa).

This species is widespread in Africa in savanna and savanna-like habitats, particularly in moist and swampy places. It is variable in shade of colour, in size and number of ocellar spots, and many aberrations have been described, which in reality are of very little value as such. No subspecific characters can be pointed out and variation seems to be influenced by season and environment. One male from Cameroun, examined by the writer at the NMN, fitted Strand's description of *Ypthima itonia* ab. *pluripupillata*, with three pupils in the f.w. subapical ocellar spot. The genital preparation showed a slight difference in the distal part of valva. In Ethiopia very large specimens have been taken in numbers. The genitalia of these correspond with *Y. itonia*.

When Van Son separated this species from *Ypthima*, one important factor was not mentioned. The uncus is loosely attached to the tegumen by a membrane and this easily breaks off during preparation. This character does not occur in the *Ypthima* dealt with here. As a matter of fact, two Thailand species, *Ypthima baldus* Fabr. and *Y. fasciata* Hew. have the same characters of the genitalia as *Y. itonia*, with regard to the loose uncus as well as to the valvae. Male genitalia, figs. 179—181.

Female genitalia, fig. 182.

Mashuna Van Son

Mashuna Van Son, (July) 1955: 159, figs. 178a, b, c and 179.

Type species: *Ypthima mashuna* Trimen, 1895.

Ypthimomorpha Overlaet, 1955a: 23 (published in December).

Mashuna mashuna (Trimen)
(fig. 185)

Ypthima mashuna Trimen, 1895: 181, pl. 5, fig. 1 (Mashonaland).

Described from Mashonaland in Rhodesia. Female genitalia, fig. 185. A very local species, frequenting swampy areas from Rhodesia to Natal and Bihe in Angola.

Mashuna upemba (Overlaet)
(figs. 183, 184)

Ypthimomorpha upemba Overlaet, 1955a: 23, fig. 16a—c.

Described from Mukana, Buye-Bala, Mubale and Lusinga at Upemba Park in Katanga. One male and one female of this species were taken by the author, July 1967, flying over a swampy patch just north of Mbisi forest, 2000 m, in Ufipa, Tanzania. March 1978 another five males and one female were taken in grassy glades of the Mbisi forest, 2200 m.

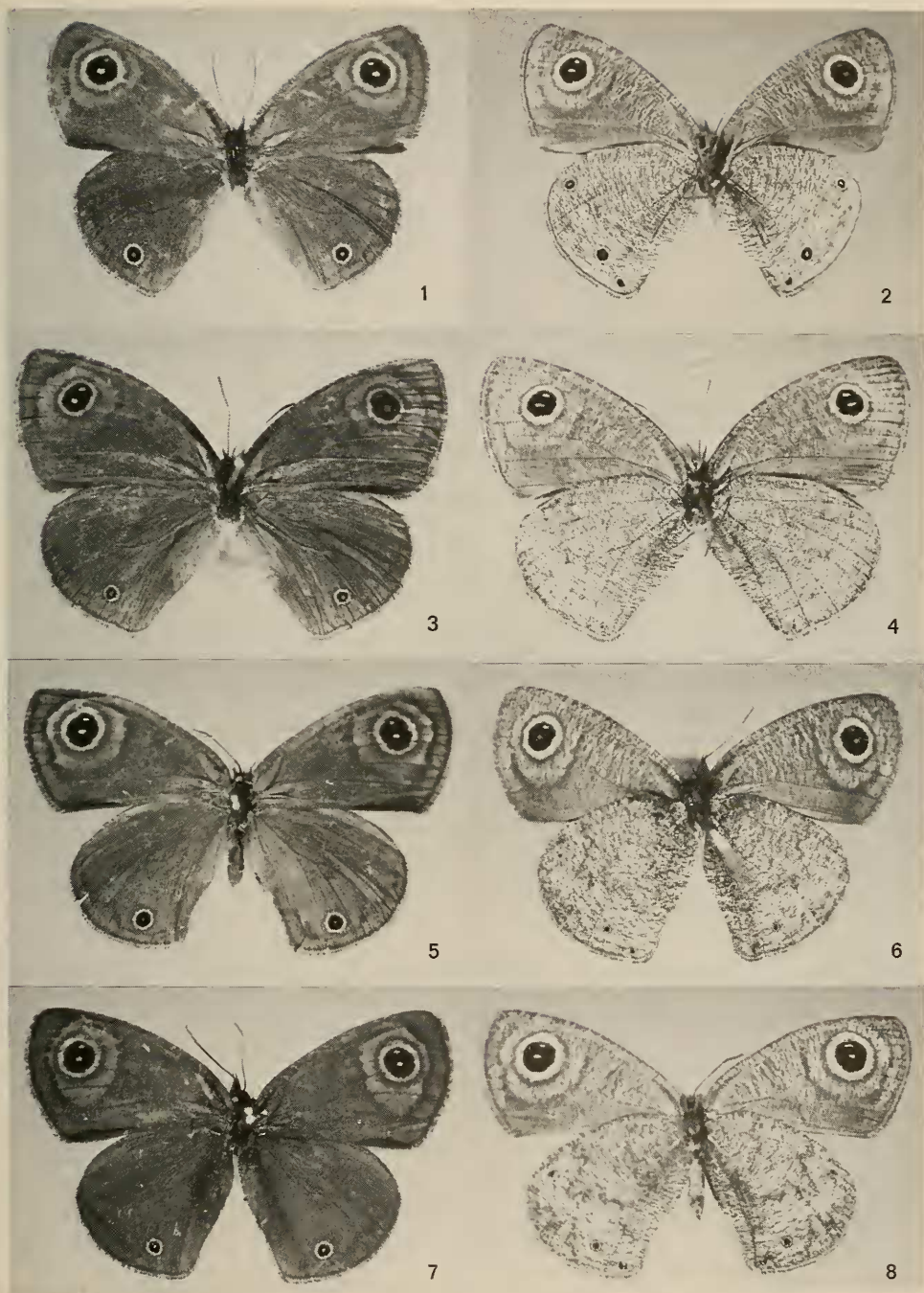
Female genitalia, figs. 183—184.

Distribution. — A very local species frequenting swampy areas in Katanga, West Tanzania and N.E. Angola.

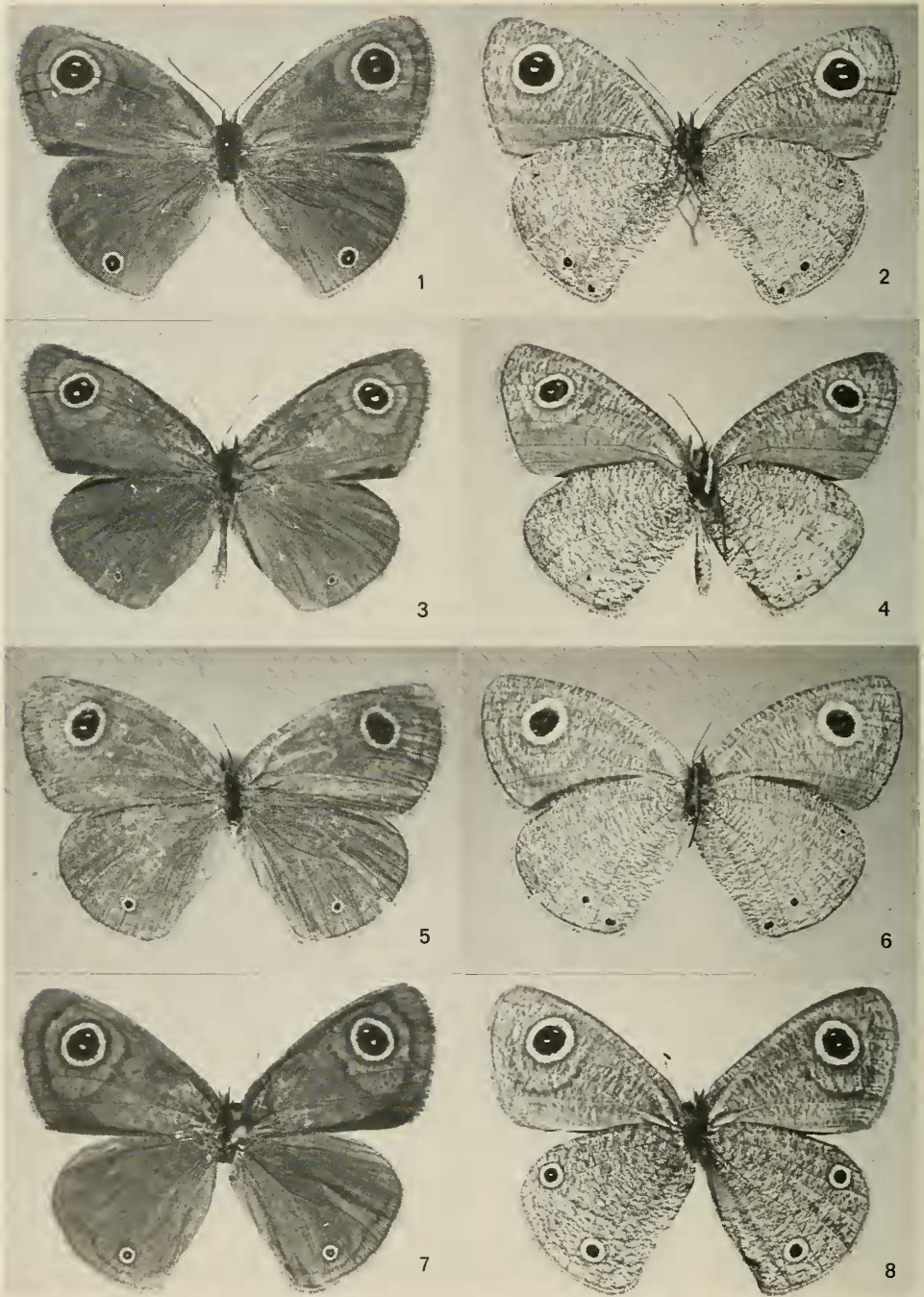
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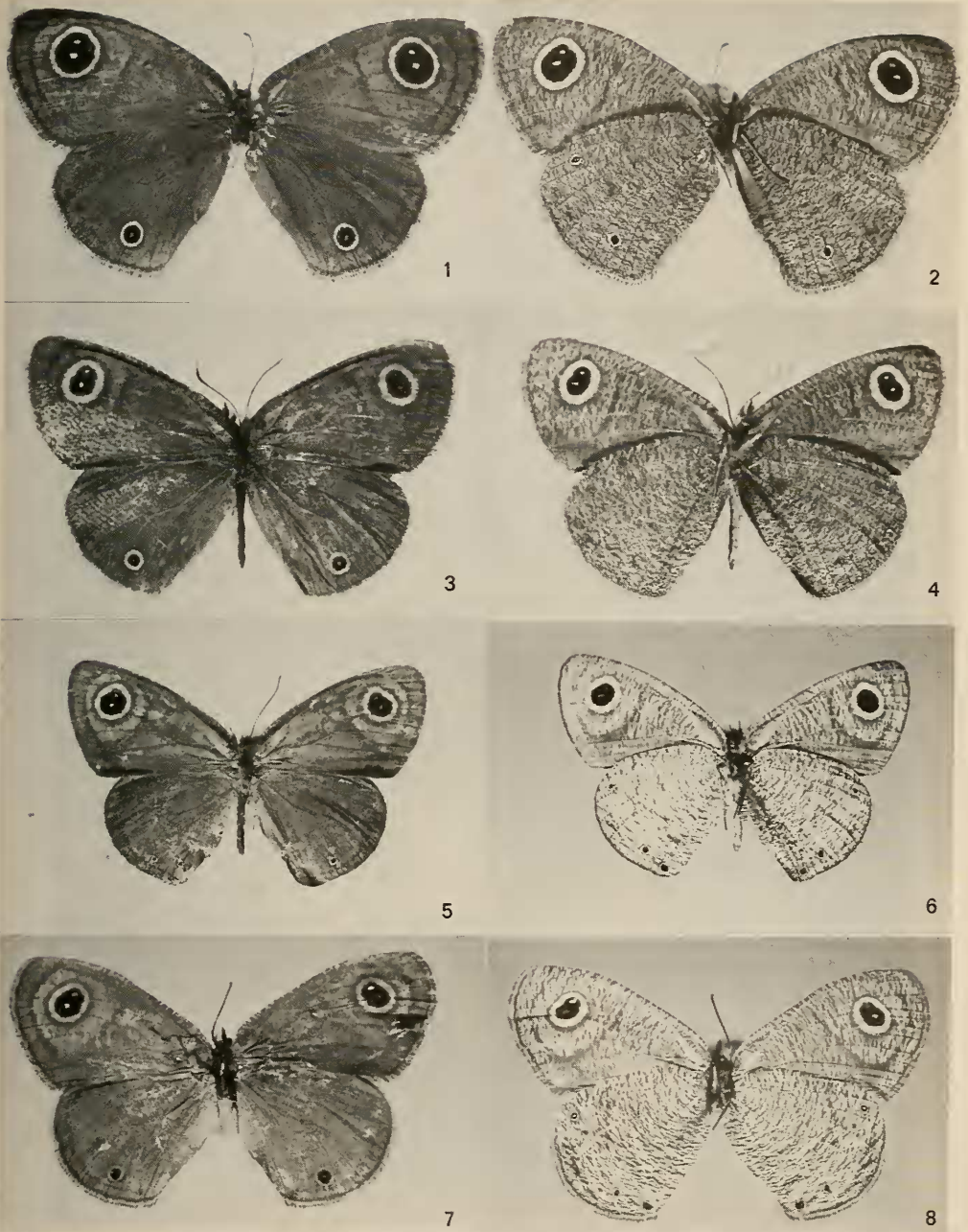
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Figs. 1—8. Upper and undersides of *Ypthima asterope asterope* Klug. 1—2, ♂, w.s.f., Ashana (Arabia); 3—4, ♀, d.s.f., Beirut (Lebanon); 5—6, ♂, Natal; 7—8, ♀, Natal.



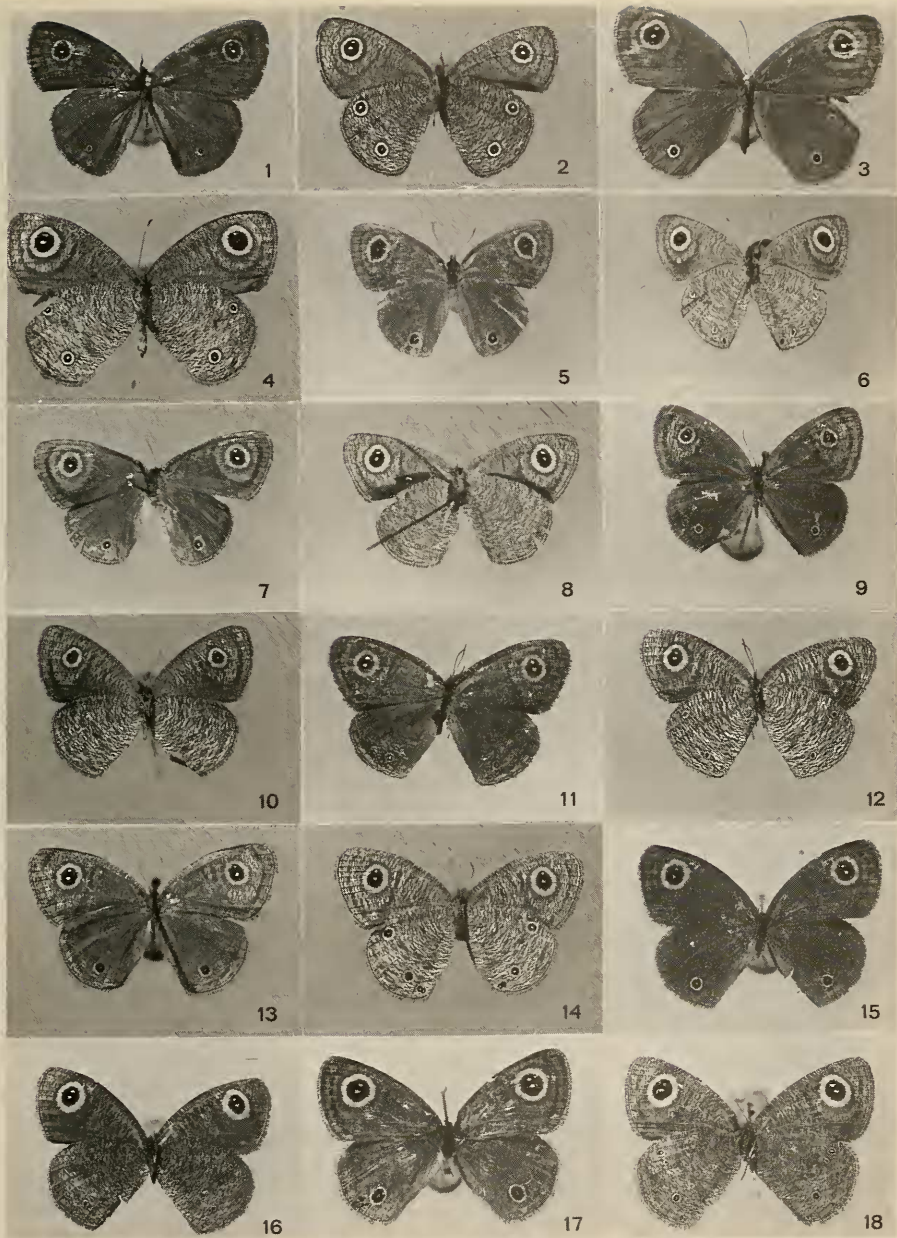
Figs. 1—8. Upper and undersides of *Ypthima* species. 1—2, *Y. asterope hereroica* Grünberg, ♂, w.s.f., S.W. Africa; 3—4, *Y. yatta* species nova, ♂, paratype, Ganale River (Ethiopia); 5—6, *Y. yatta* species nova, ♀, allotype, Sheik Hussein, Upper Schebehli River (Ethiopia); 7—8, *Y. simplicia* Butler, w.s.f., Bole Valley (W. Ethiopia).



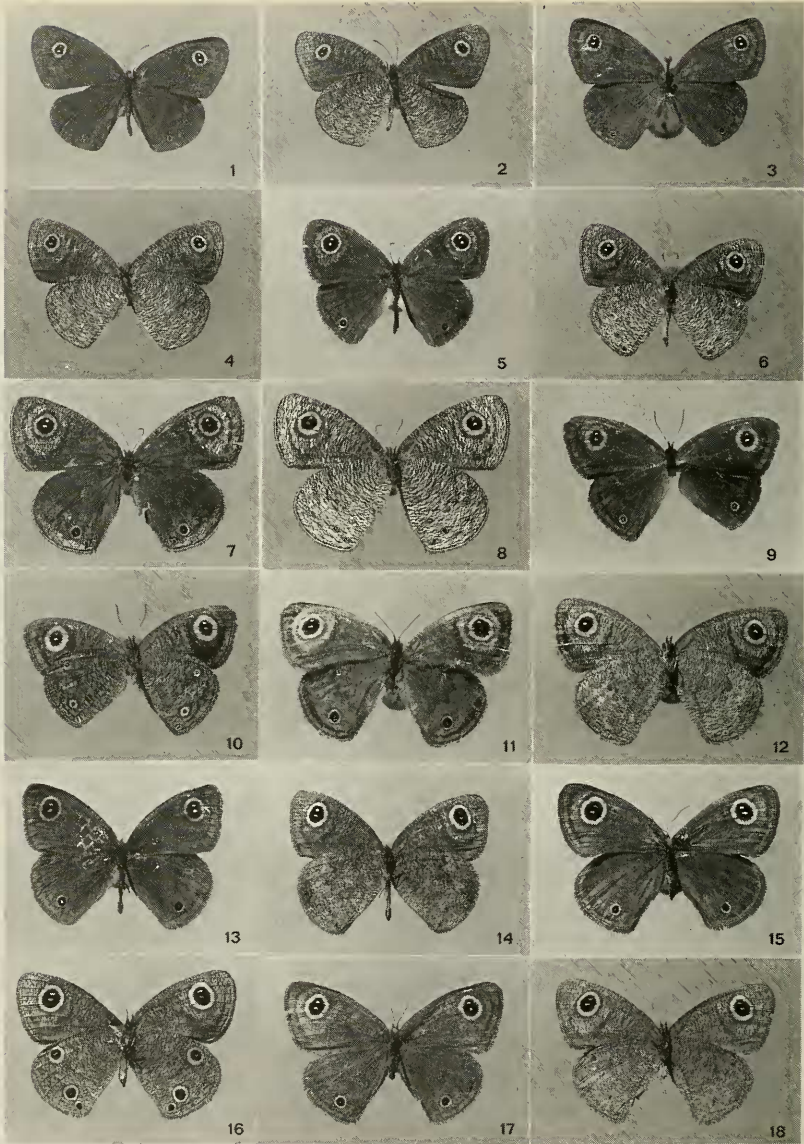
Figs. 1—8. Upper and undersides of *Ypthima* species. 1—2, *Y. simplicia* Butler, ♀, w.s.f., Bole Valley (W. Ethiopia); 3—4, *Y. simplicia* Butler, ♂, d.s.f., Arussi Galla (Ethiopia); 5—6, *Y. jacksoni* species nova, ♂, paratype, Masongaleni (C. Africa); 7—8, *Y. jacksoni* species nova, ♀, allotype, Kata Mane River (Ethiopia).



Figs. 1—18. Upper and undersides of *Ypthima* species. 1—6, *Y. rhodesiana* Carcasson, Mpanda, Sibweza (Tanzania); 1—2, ♂, w.s.f.; 3—4, ♂, d.s.f.; 5—6, ♀, d.s.f.; 7—14, *Y. condamini condamini* species et subspecies nova; 7—8, ♂, d.s.f., Ruaha Nat. Park (Tanzania); 9—10, ♀, d.s.f., Mpanda, Rukwa (Tanzania); 11—12, ♂, w.s.f., Mpanda, Sibweza (Tanzania); 13—14, ♀, w.s.f., Mpanda, Sibweza (Tanzania); 15—18, *Y. condamini nigeriae* subspecies nova, Niokolo Koba (Senegal); 15—16, ♂, paratype, w.s.f.; 17—18, ♀, paratype, d.s.f.



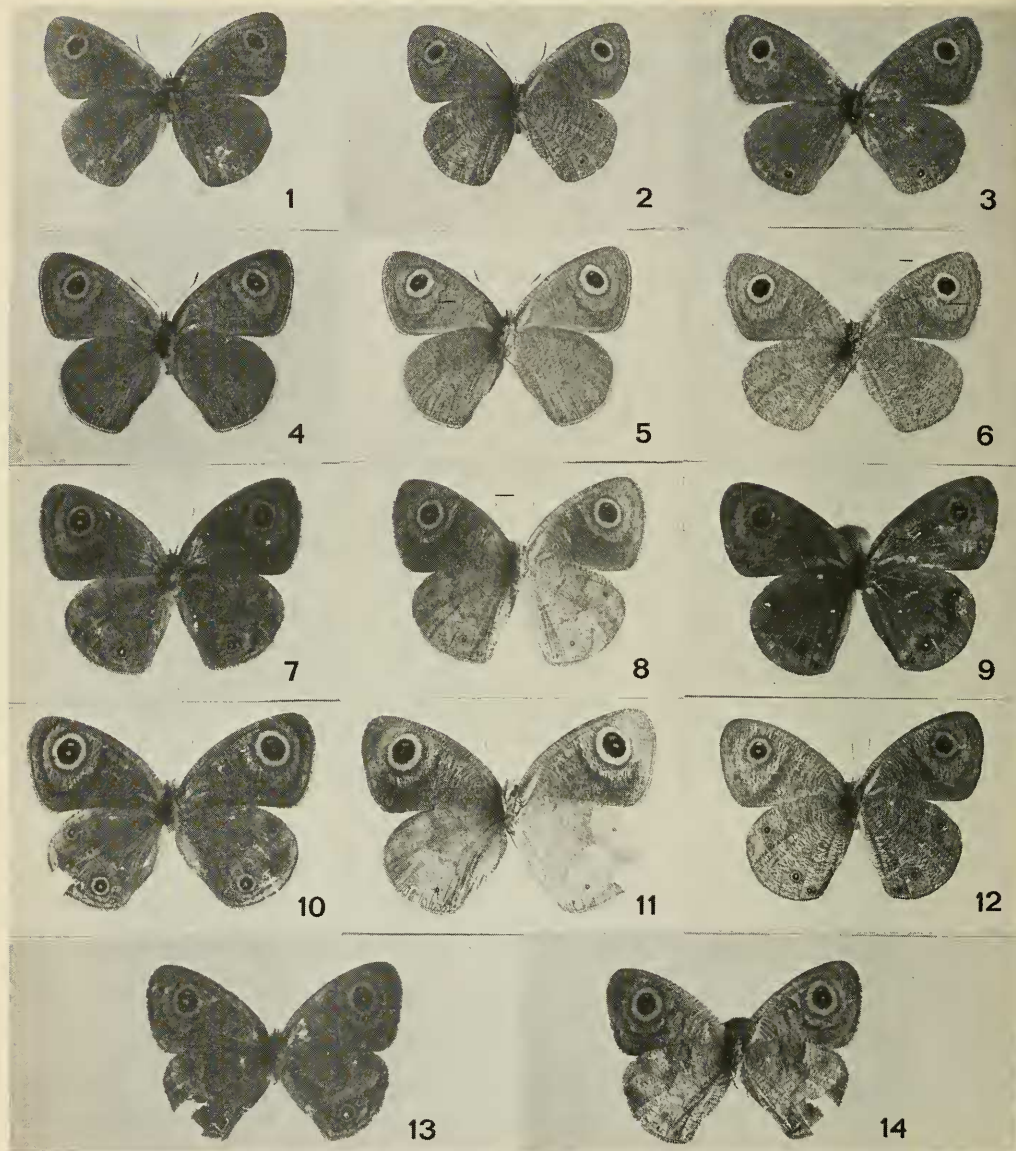
Figs. 1—18. Upper and undersides of *Ypthima* species. 1—4, *Y. antennata antennata* van Son; 1—2, ♂, w.s.t., Suk (Kenya); 3—4, ♀, w.s.f., Ngara (Tanzania); 5—8, *Y. vuattouxi* species nova, Lamto (Ivory Coast); 5—6, ♂, paratype; 7—8, ♀, allotype; 9—10, ♂, d.s.f., Lamto (Ivory Coast); 11—12, ♂, w.s.f., Mbalmayu (Cameroun); 13—14, ♀, w.s.f., Lamto (Ivory Coast); 15—18, *Y. recta* Overlaet; 15—16, ♂, Rulenge, Ngara (Tanzania); 17—18, ♀, Ntungamu, Ngara (Tanzania).



Figs. 1—18. Upper and undersides of *Ypthima* species. 1—8, *Y. granulosa* Butler; 1—2, ♂, inland type, 20 miles North of Tabora (Tanzania); 3—4, ♂, coastal type, d.s.f., Morogoro (Tanzania); 5—6, ♂, coastal type, w.s.f., Kenya coast; 7—8, ♀, coastal type, w.s.f., Mikumi (Tanzania); 9—12, *Y. pupillaris pupillaris* Butler, Lamto (Ivory Coast); 9—10, ♂, w.s.f.; 11—12, ♀, d.s.f.; 13—18, *Y. pupillaris obscurata* subspecies nova; 13—14, ♂, d.s.f., Ngara (Tanzania); 15—16, ♀, w.s.f., Mpanda, Kampisa (Tanzania); 17—18, ♀, d.s.f., Kigoma, Mahale (Tanzania).



Figs. 1—18. Upper and undersides of *Ypthima* species. 1—2, *Y. impura impura* Elwes & Edwards, ♂, d.s.f., Lamto (Ivory Coast); 3—8, *Y. impura paupera* Ungemach; 3—4, ♂, w.s.f., Kigoma, Ngombe (Tanzania); 5—6, ♀, d.s.f., Mpanda (Tanzania); 7, ♀, w.s.f. Endeibes (Kenya); 8, ♂, w.s.f., Kigoma, Ngombe (Tanzania); 9—12, *Y. praestans* Overlaet, ♀; 9—10, w.s.f., North of Santa Gomba (Angola); 11—12, d.s.f., Chianga (Angola); 13—16, *Y. doleta* Kirby; 13—14, ♂, Likpe Mañe (Ghana); 15—16, ♀, Mbalmayu (Cameroun); 17—18, *Y. diplomata* Overlaet, ♀, Northeast of Negola (Angola).



Figs. 1—14. Upper and undersides of types of *Ypthima* species. 1—2, 4—5, *Y. congoana* Overlaet, paratypes; 1—2, ♂, Katanga; 4—5, ♀, Elisabethville; 3, 6, *Y. recta* Overlaet, ♀, paratype, Elisabethville; 7—8, 10—11, *Y. pulchra* Overlaet, paratypes; 7—8, ♂, Kafakumba; 10—11, ♀, Sandoa; 9, 12, *Y. praestans* Overlaet, ♂, holotype, Sankuru; 13—14, *Y. diplommata* Overlaet, ♂, holotype, Kafakumba.